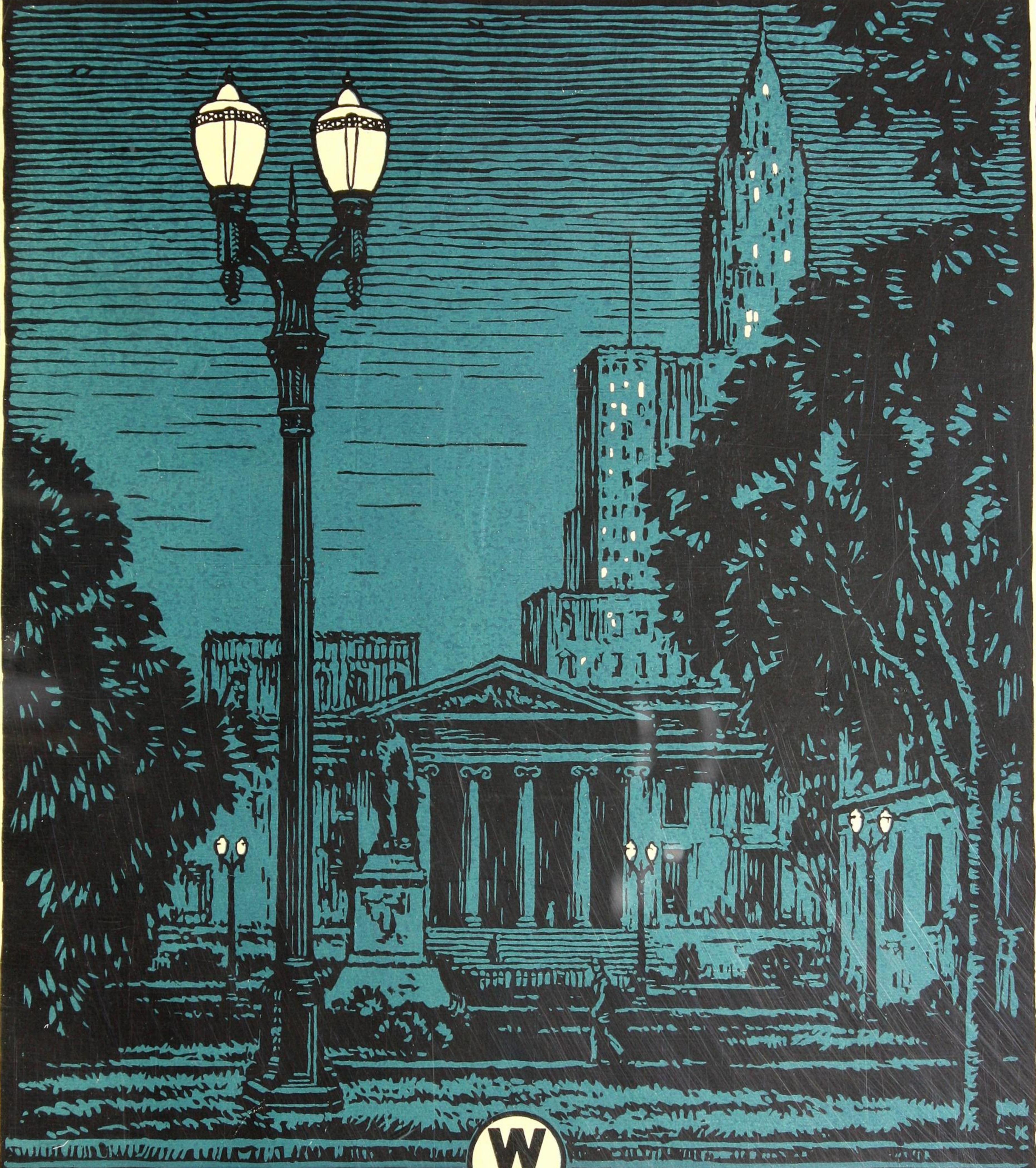
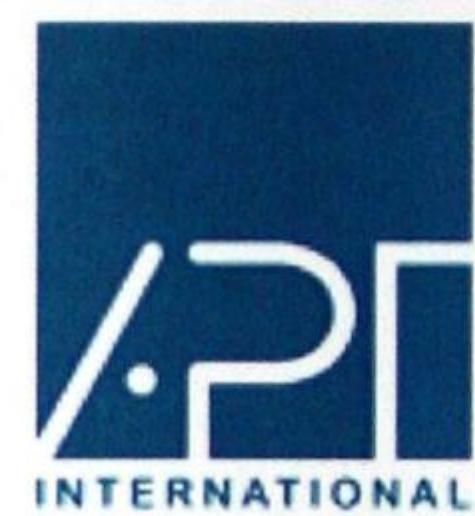


146-12.



**Westinghouse**  
ORNAMENTAL STREET LIGHTING

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CCA

# Westinghouse

## Ornamental Street Lighting Equipment

*Catalogue 8-B*  
*June, 1925*



Westinghouse Electric & Manufacturing Company  
George Cutter Works  
South Bend, Indiana

### NOTE

THIS catalogue covers equipment for *Ornamental Street Lighting* only. Full information concerning Westinghouse *Overhead Street Lighting Equipment* is contained in Catalogue 8-A, which may be obtained from any Westinghouse District Office.

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**ORNAMENTAL STREET LIGHTING**

Ornamental street lighting is the paramount attainment in city beautification. It expresses art and economy, progress and morality, safety and comfort as the prime issues of a city or town government. A suitable installation of ornamental street lighting accomplishes an aesthetic purpose as well as a practical one. It encourages civic betterment and stimulates business activity. By day it improves the appearance of a city's streets by eliminating the need for unsightly overhead wires with their accompanying wooden poles. By night it provides a pleasing and attractive illumination which attracts visitors and residents alike, but provides the maximum degree of safety for the passage of traffic along our city streets. The city that does not provide adequate street lighting is shirking its most important moral duty as a municipality.

The selection of artistic standards is the most important consideration in the plan of an ornamental lighting system. The posts should harmonize with their

surroundings, should be sturdy in construction and easy to install. Westinghouse-Cutter standards are made by pioneers in the field of outdoor electric lighting. Over a third of a century has been devoted to the design and manufacture of electrical lighting fixtures. Westinghouse street lighting standards are artistic in design. They are made of either cast iron or concrete, each type being made by the most approved manufacturing methods known to science. Standards are made in various sizes, all of the accessories being interchangeable, so that a wide degree of variety can be secured in designs of similar motifs.

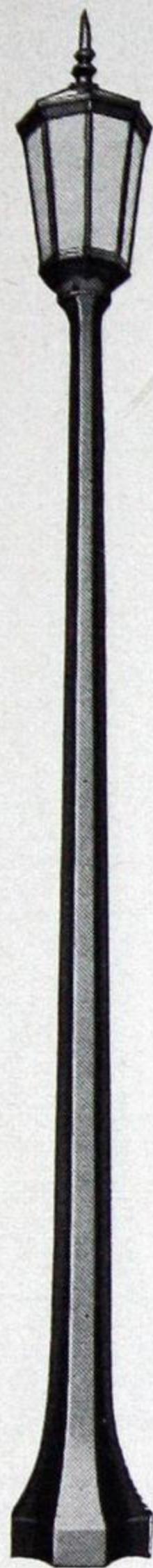
Cast iron standards are made of the best quality grey iron, cast from metal patterns. This method insures accuracy of design and careful adherence to the details of ornamentation, etc.

The well known Hollowspun concrete lighting standards are a recent addition to the Westinghouse line of ornamental street lighting equipment. This type of standard is manufactured by a special

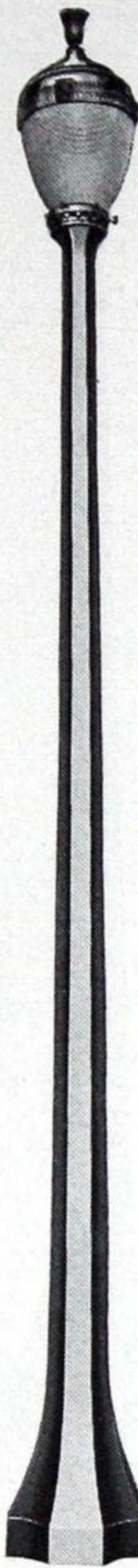
centrifugal process which insures it against the inherent weaknesses of other methods of concrete post construction.

Until recently, the single-light standard has been used almost exclusively in the residential portions of cities, for park and boulevard lighting and for entrances to private grounds and public buildings. The perfection of incandescent lamps in sizes up to 25,000 lumens and the development of the Westinghouse Bi-lux refractor has made possible the installation of single-light standards in downtown business districts where hitherto two or three arc lights were needed to provide an equivalent illumination.

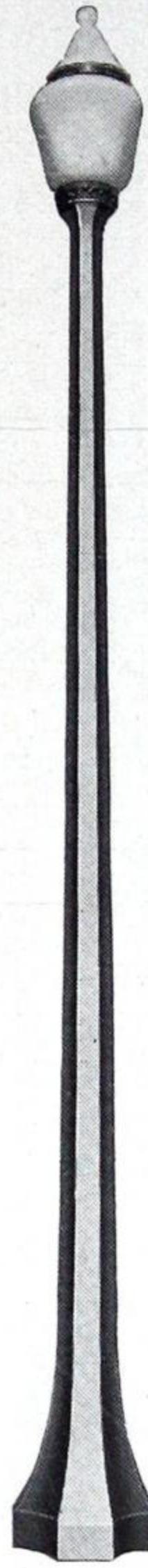
The advent of the Bi-lux refractor marks a new epoch in street lighting history. It has met the modern demands for economy in investment and maintenance costs and at the same time provided for the ever increasing requirements for higher intensities without the expense of decreasing the spacing of units along the street.

**SINGLE-LIGHT CAST-IRON STANDARDS****ARCADIAN 15 STANDARDS\***

STYLE NO. 351794



STYLE NO. 351802



STYLE NO. 351784



STYLE NO. 351788

**With Sol-Lux Sr. Rectilinear Globe and Canopy**

Description	Style No.	Ship. Wt. Lb.	List Price
With Standard Film Socket and Bi-lux refractor.....	351780	612	\$155 00
With Standard Film Socket without Bi-lux refractor.....	351781	597	135 00
With Mogul Multiple Socket and Bi-lux refractor.....	351782	612	154 00
With Mogul Multiple Socket without Bi-lux refractor.....	351783	597	134 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351784	597	135 00
With Mogul Multiple Socket.....	351785	597	134 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351786	595	133 00
With Mogul Multiple Socket.....	351787	595	132 00

**With Egyptian Sr. Lighting Unit**

With Standard Film Socket.....	351802	600	144 00
With Mogul Multiple Socket.....	351803	600	143 00

**With Paragon Sr. Rectilinear Globe and Canopy**

Description	Style No.	Ship. Wt. Lb.	List Price
With Standard Film Socket and Bi-lux refractor.....	351788	625	\$174 00
With Standard Film Socket without Bi-lux refractor.....	351789	610	154 00
With Mogul Multiple Socket and Bi-lux refractor.....	351790	625	173 00
With Mogul Multiple Socket without Bi-lux refractor.....	351791	610	153 00

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351792	610	154 00
With Mogul Multiple Socket.....	351793	610	153 00

**With Octagonal Sr. Lighting Unit**

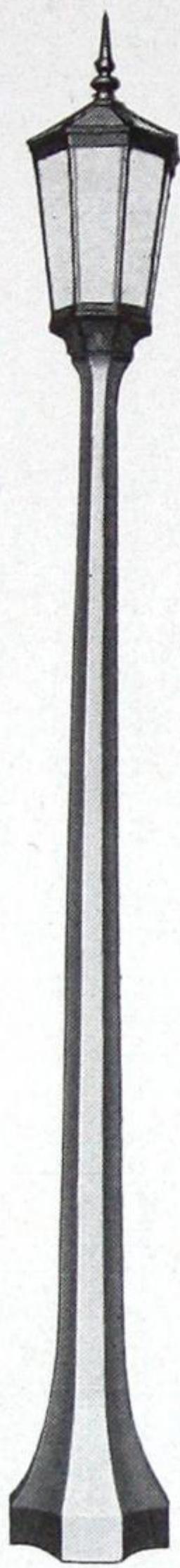
With Standard Film Socket and Bi-lux refractor.....	351794	640	212 00
With Standard Film Socket without Bi-lux refractor.....	351795	625	192 00
With Mogul Multiple Socket and Bi-lux refractor.....	351796	640	211 00
With Mogul Multiple Socket without Bi-lux refractor.....	351797	625	191 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

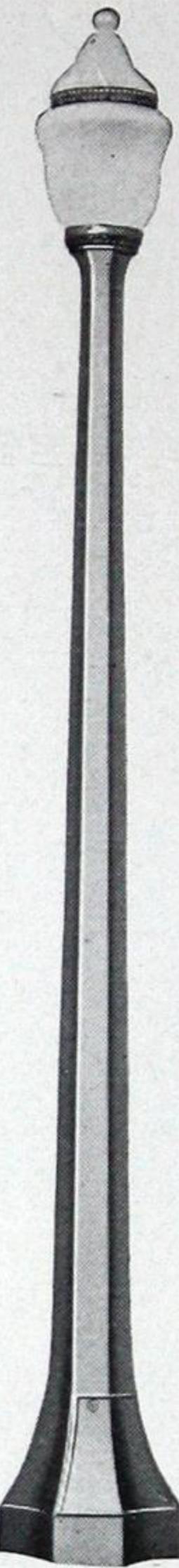
## ARCADIAN 12 STANDARDS\*



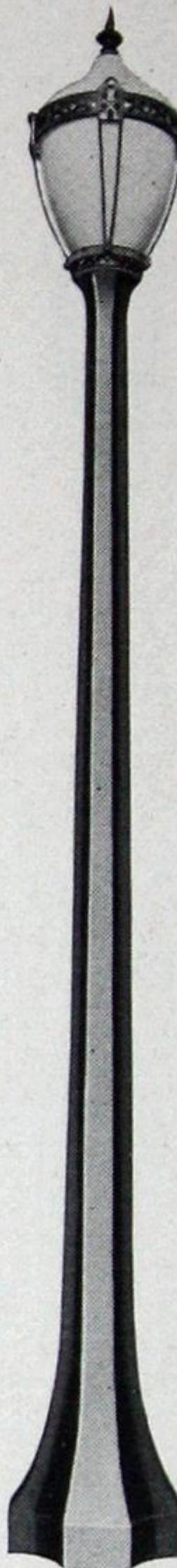
STYLE NO. 351816



STYLE NO. 351822



STYLE NO. 351808



STYLE NO. 351810

Description	Style No.	Ship. Lb.	List Price
<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>			
With Standard Film Socket and Bi-lux refractor.....	351804	464	\$123 00
With Standard Film Socket without Bi-lux refractor.....	351805	449	103 00
With Mogul Multiple Socket and Bi-lux refractor.....	351806	464	122 00
With Mogul Multiple Socket without Bi-lux refractor.....	351807	449	102 00
<b>With Sol-Lux Sr. Monax Globe and Canopy</b>			
With Standard Film Socket.....	351808	449	103 00
With Mogul Multiple Socket.....	353478	449	102 00
<b>With Sol-Lux Sr. Monax Globe, Metal Canopy</b>			
With Standard Film Socket.....	351809	447	101 00
With Mogul Multiple Socket.....	343619	447	100 00
<b>With Paragon Sr. Rectilinear Globe and Canopy</b>			
With Standard Film Socket and Bi-lux refractor.....	351810	477	142 00
With Standard Film Socket without Bi-lux refractor.....	351811	462	122 00
With Mogul Multiple Socket and Bi-lux refractor.....	351812	477	141 00
With Mogul Multiple Socket without Bi-lux refractor.....	351813	462	121 00

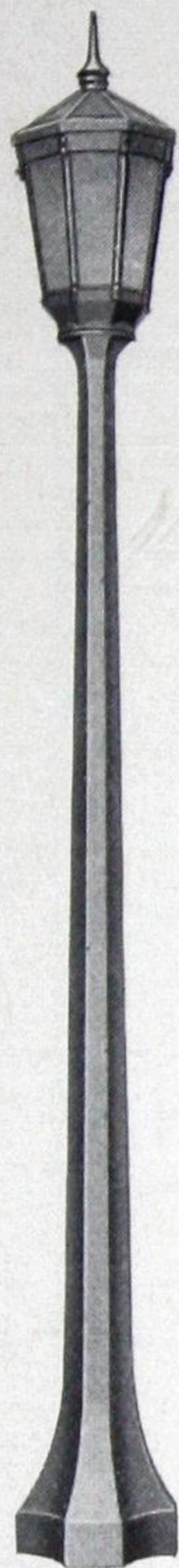
Description	Style No.	Ship. Lb.	List Price
<b>With Paragon Sr. Monax Globe and Canopy</b>			
With Standard Film Socket.....	351814	462	\$122 00
With Mogul Multiple Socket.....	351815	462	121 00
<b>With Octagonal Sr. Lighting Unit</b>			
With Standard Film Socket and Bi-lux refractor.....	351816	492	180 00
With Standard Film Socket without Bi-lux refractor.....	351817	477	160 00
With Mogul Multiple Socket and Bi-lux refractor.....	351818	492	179 00
With Mogul Multiple Socket without Bi-lux refractor.....	353492	477	159 00
<b>With Octagonal Jr. Lighting Unit</b>			
With Standard Film Socket and Bi-lux refractor.....	351819	477	139 00
With Standard Film Socket without Bi-lux refractor.....	351820	462	119 00
With Mogul Multiple Socket and Bi-lux refractor.....	351821	477	138 00
With Mogul Multiple Socket without Bi-lux refractor.....	353501	462	118 00
<b>With Egyptian Sr. Lighting Unit</b>			
With Standard Film Socket.....	351822	452	112 00
With Mogul Multiple Socket.....	351765	452	111 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

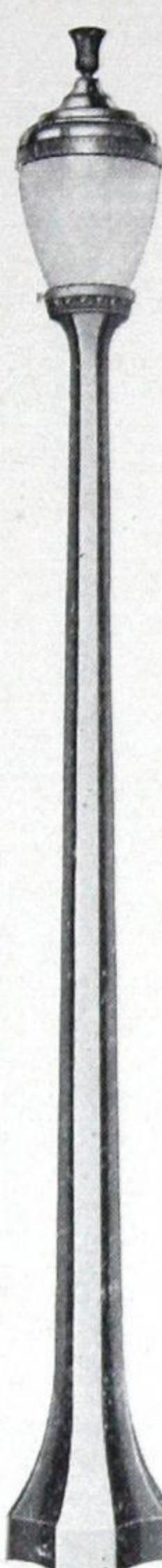
*Order by Style Number*

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

ARCADIAN 10 STANDARDS\*



STYLE NO. 351832



STYLE NO. 351835



STYLE NO. 351825



STYLE NO. 351827

Description	Style No.	Ship. Wt. Lb.	List Price
<b>With Sol-Lux Jr. Rectilinear Globe and Canopy</b>			

With Standard Film Socket.....	351823	282	\$ 80 00
With Mogul Multiple Socket.....	351824	282	79 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351825	282	80 00
With Mogul Multiple Socket.....	353533	282	79 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351826	280	78 00
With Mogul Multiple Socket.....	343628	280	77 00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351827	310	120 00
With Standard Film Socket without Bi-lux refractor.....	351828	295	100 00
With Mogul Multiple Socket and Bi-lux refractor.....	351829	310	119 00
With Mogul Multiple Socket without Bi-lux refractor.....	351830	295	99 00

Description	Style No.	Ship. Wt. Lb.	List Price
<b>With Paragon Jr. Monax Globe and Canopy</b>			

With Standard Film Socket.....	351766	295	\$100 00
With Mogul Multiple Socket.....	351831	295	99 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351832	315	122 00
With Standard Film Socket without Bi-lux refractor.....	351833	300	102 00
With Mogul Multiple Socket and Bi-lux refractor.....	351834	315	121 00
With Mogul Multiple Socket without Bi-lux refractor.....	353551	300	101 00

**With Egyptian Jr. Lighting Unit**

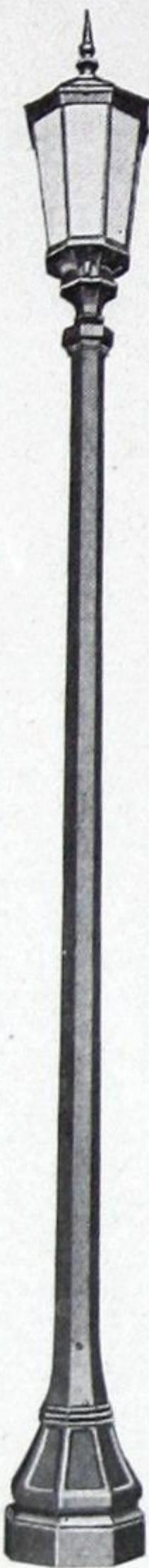
With Standard Film Socket.....	351835	285	89 00
With Mogul Multiple Socket.....	351767	285	88 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

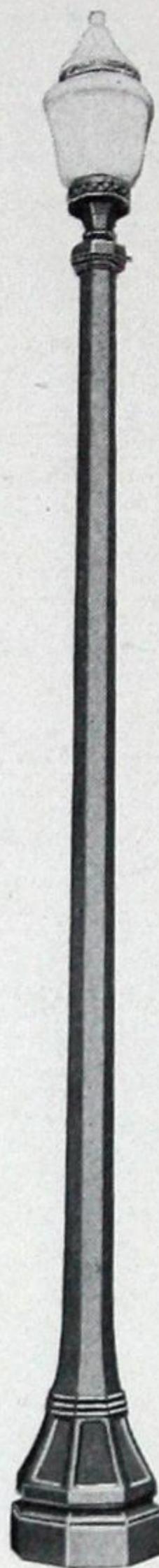
## **EDGEWATER 15 STANDARDS\***



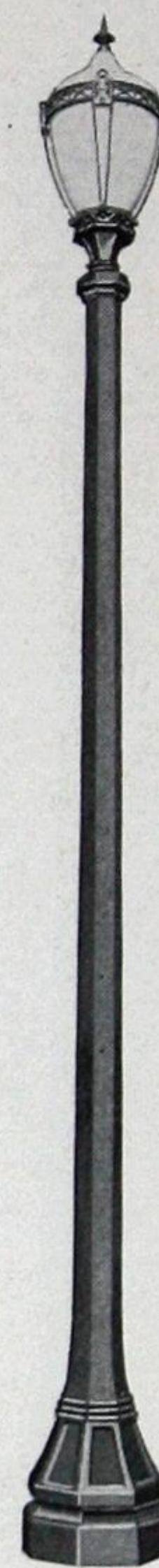
STYLE No. 351850



STYLE No. 351854



STYLE No. 351840



STYLE No. 351844

Description	Style No.	Ship. Lb.	Wt. Lb.	List Price
<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>				
With Standard Film Socket and Bi-lux refractor.....	351836	722	\$159	00
With Standard Film Socket without Bi-lux refractor.....	351837	707	139	00
With Mogul Multiple Socket and Bi-lux refractor.....	351838	722	158	00
With Mogul Multiple Socket without Bi-lux refractor.....	351839	707	138	00

With Sol-Lux Sr. Monax Globe and Canopy

With Standard Film Socket..... 351840 707 139 00  
 With Mogul Multiple Socket..... 351841 707 138 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket..... 351842 705 137 00  
 With Mogul Multiple Socket..... 351843 705 136 00

**With Egyptian Sr. Lighting Unit**

With Standard Film Socket..... 351854 730 148 00  
 With Mogul Multiple Socket..... 351855 730 147 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	<b>351844</b>	755	\$178 00
With Standard Film Socket without Bi-lux refractor.....	<b>351845</b>	740	158 00
With Mogul Multiple Socket and Bi-lux refractor.....	<b>351846</b>	755	177 00
With Mogul Multiple Socket without Bi-lux refractor.....	<b>351847</b>	740	157 00

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	<b>351848</b>	740	158	00
With Mogul Multiple Socket.....	<b>351849</b>	740	157	00

#### **With Octagonal Sr. Lighting Unit**

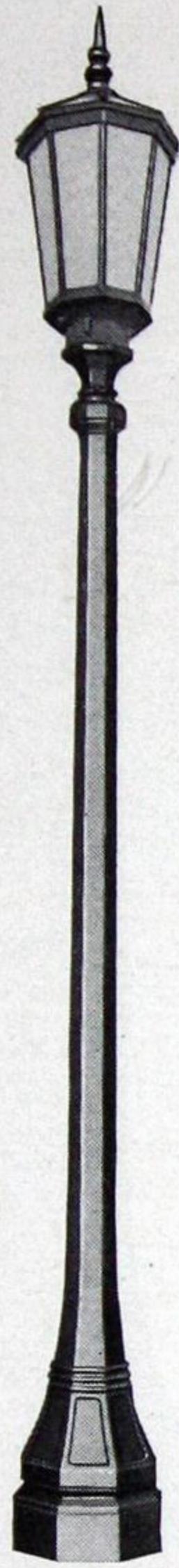
With Standard Film Socket and Bi-lux refractor.....	<b>351850</b>	750	<b>216 00</b>
With Standard Film Socket without Bi-lux refractor.....	<b>351851</b>	735	<b>196 00</b>
With Mogul Multiple Socket and Bi-lux refractor.....	<b>351852</b>	750	<b>215 00</b>
With Mogul Multiple Socket without Bi-lux refractor.....	<b>351853</b>	735	<b>195 00</b>

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

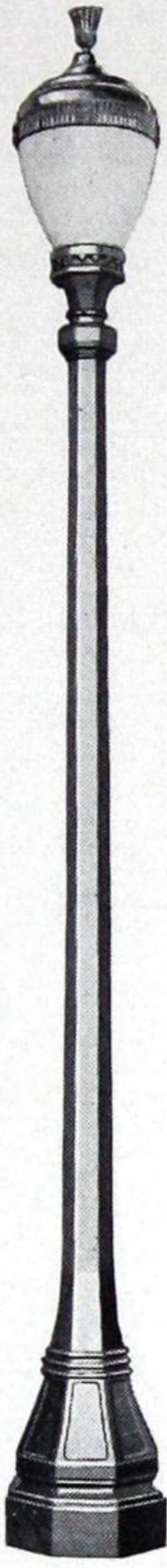
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

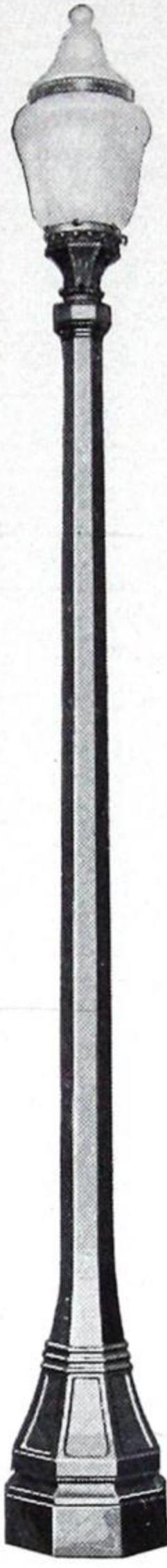
## EDGEWATER 12 STANDARDS\*



STYLE No. 351868



STYLE No. 351874



STYLE No. 351860



STYLE No. 351862

## Description

Style No. Ship. Lb. Wt. List Price

<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>				
With Standard Film Socket and Bi-lux refractor.....	351856	500	\$127	00
With Standard Film Socket without Bi-lux refractor.....	351857	485	107	00
With Mogul Multiple Socket and Bi-lux refractor.....	351858	500	126	00
With Mogul Multiple Socket without Bi-lux refractor.....	351859	485	106	00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351860	485	107	00
With Mogul Multiple Socket.....	353592	485	106	00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351861	483	105	00
With Mogul Multiple Socket.....	353587	483	104	00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351862	515	146	00
With Standard Film Socket without Bi-lux refractor.....	351863	500	126	00
With Mogul Multiple Socket and Bi-lux refractor.....	351864	515	145	00
With Mogul Multiple Socket without Bi-lux refractor.....	351865	500	125	00

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351866	500	\$126	00
With Mogul Multiple Socket.....	351867	500	125	00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351868	530	184	00
With Standard Film Socket without Bi-lux refractor.....	351869	515	164	00
With Mogul Multiple Socket and Bi-lux refractor.....	351870	530	183	00
With Mogul Multiple Socket without Bi-lux refractor.....	353577	515	163	00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351871	515	143	00
With Standard Film Socket without Bi-lux refractor.....	351872	500	123	00
With Mogul Multiple Socket and Bi-lux refractor.....	351873	515	142	00
With Mogul Multiple Socket without Bi-lux refractor.....	353603	500	122	00

**With Egyptian Sr. Lighting Unit**

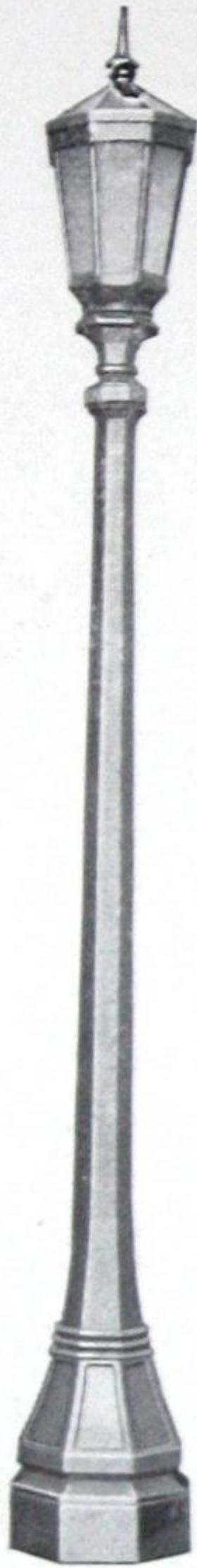
With Standard Film Socket.....	351874	490	116	00
With Mogul Multiple Socket.....	352522	490	115	00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

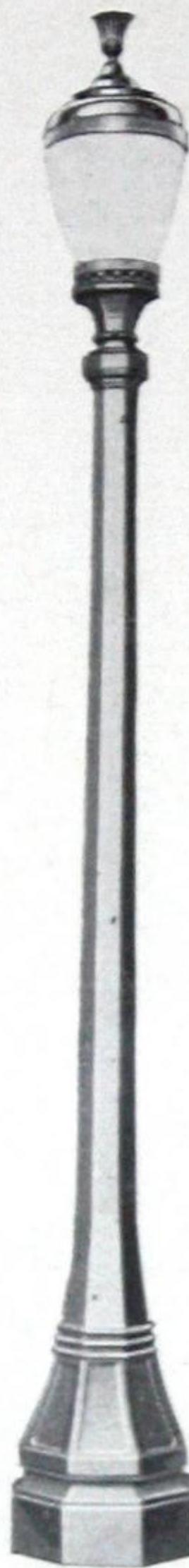
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

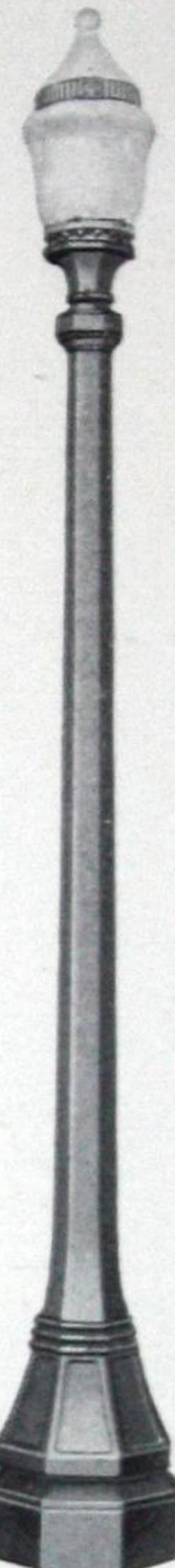
## EDGEWATER 10 STANDARDS\*



STYLE NO. 351885



STYLE NO. 351888



STYLE NO. 351877



STYLE NO. 351879

## Description

Style No. Ship. Wt., Lb. List Price

<b>With Sol-Lux Jr. Rectilinear Globe and Canopy</b>				
With Standard Film Socket.....	351875	360	\$91	00
With Mogul Multiple Socket.....	351876	360	90	00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351877	360	91	00
With Mogul Multiple Socket.....	353621	360	90	00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351878	358	89	00
With Mogul Multiple Socket.....	337920	358	88	00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351879	390	131	00
With Standard Film Socket without Bi-lux refractor.....	351880	375	111	00
With Mogul Multiple Socket and Bi-lux refractor.....	351881	390	130	00
With Mogul Multiple Socket without Bi-lux refractor.....	351882	375	110	00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

## Description

Style No. Ship. Wt., Lb. List Price

**With Paragon Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351883	375	\$111	00
With Mogul Multiple Socket.....	351884	375	110	00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351885	395	133	00
With Standard Film Socket without Bi-lux refractor.....	351886	380	113	00
With Mogul Multiple Socket and Bi-lux refractor.....	351887	395	132	00
With Mogul Multiple Socket without Bi-lux refractor.....	353633	380	112	00

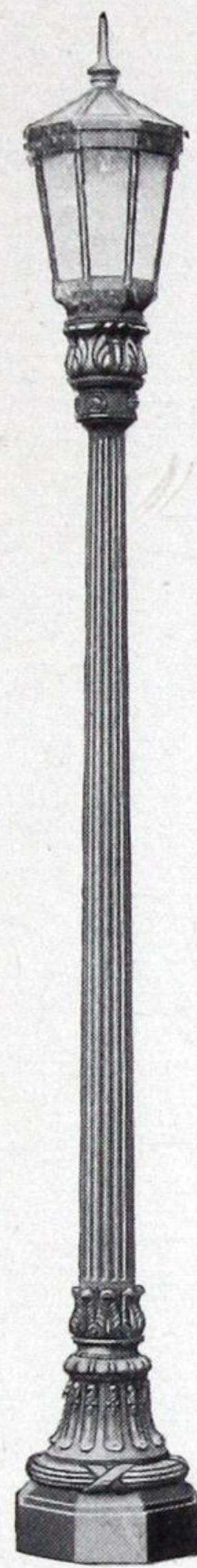
**With Egyptian Jr. Lighting Unit**

With Standard Film Socket.....	351888	365	100	00
With Mogul Multiple Socket.....	352523	365	99	00

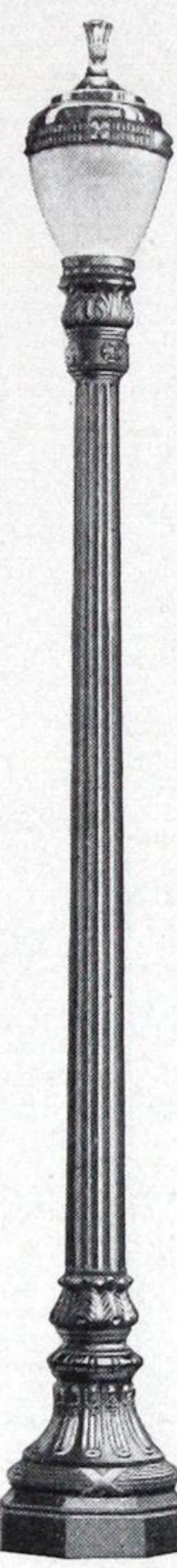
Order by Style Number

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

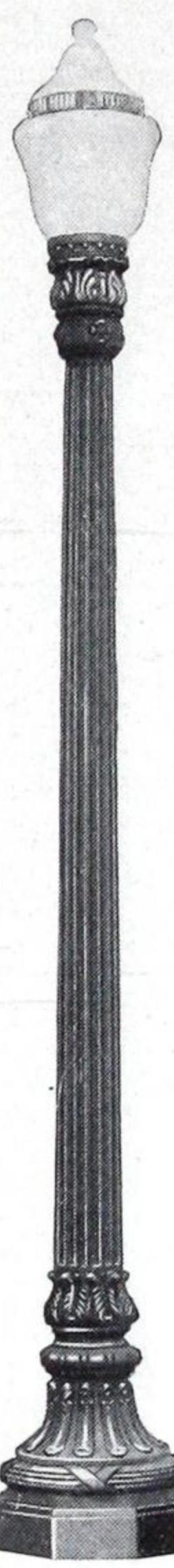
COMMERCIAL 11 STANDARDS\*



STYLE No. 351900



STYLE No. 351906



STYLE No. 351893



STYLE No. 352289

Description

Style No. Ship. Wt., Lb. List Price

<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>			
With Standard Film Socket and Bi-lux refractor.....	351889	520	\$158 00
With Standard Film Socket without Bi-lux refractor.....	351890	505	138 00
With Mogul Multiple Socket and Bi-lux refractor.....	351891	520	157 00
With Mogul Multiple Socket without Bi-lux refractor.....	351892	505	137 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351893	505	138 00
With Mogul Multiple Socket.....	353652	505	137 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351894	503	136 00
With Mogul Multiple Socket.....	334782	503	135 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	352289	535	177 00
With Standard Film Socket without Bi-lux refractor.....	351895	520	157 00
With Mogul Multiple Socket and Bi-lux refractor.....	351896	535	176 00
With Mogul Multiple Socket without Bi-lux refractor.....	351897	520	156 00

Description

Style No. Ship. Wt., Lb. List Price

<b>With Paragon Sr. Monax Globe and Canopy</b>			
With Standard Film Socket.....	351898	520	\$157 00
With Mogul Multiple Socket.....	351899	520	156 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351900	550	215 00
With Standard Film Socket without Bi-lux refractor.....	351901	535	195 00
With Mogul Multiple Socket and Bi-lux refractor.....	351902	550	214 00
With Mogul Multiple Socket without Bi-lux refractor.....	353662	535	194 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351903	515	174 00
With Standard Film Socket without Bi-lux refractor.....	351904	500	154 00
With Mogul Multiple Socket and Bi-lux refractor.....	351905	515	173 00
With Mogul Multiple Socket without Bi-lux refractor.....	353668	500	153 00

**With Egyptian Sr. Lighting Unit**

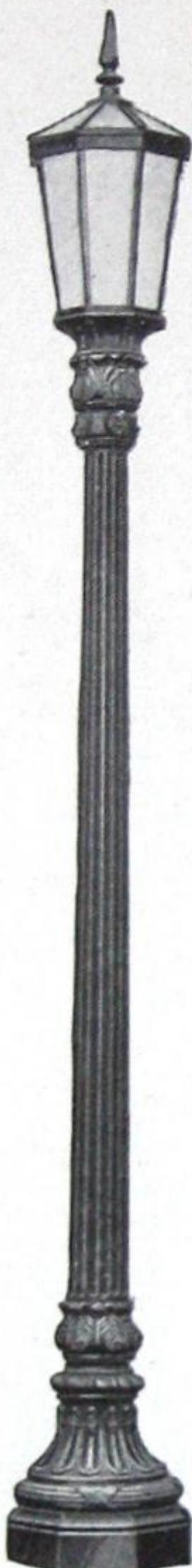
With Standard Film Socket.....	351906	510	147 00
With Mogul Multiple Socket.....	353675	510	146 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

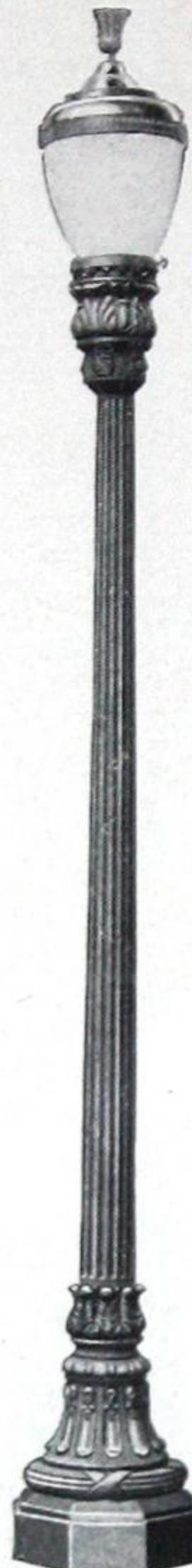
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

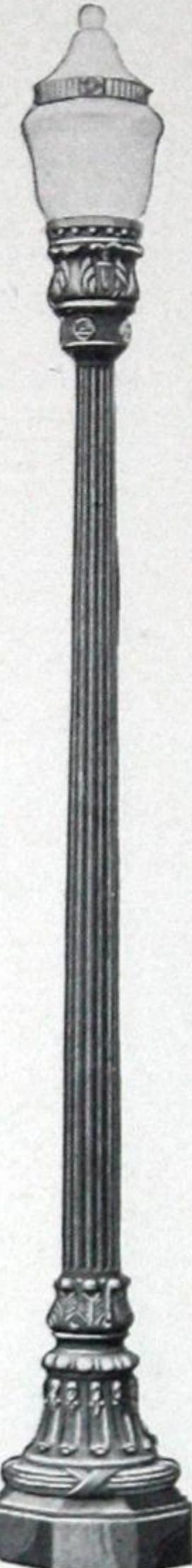
## COMMERCIAL 10 STANDARDS\*



STYLE No. 351916



STYLE No. 351919



STYLE No. 351909



STYLE No. 352290

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Sol-Lux Jr. Rectilinear Globe and Canopy**

With Standard Film Socket.....	351907	360	\$96 00
With Mogul Multiple Socket.....	351908	360	95 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351909	360	96 00
With Mogul Multiple Socket.....	353697	360	95 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351910	358	94 00
With Mogul Multiple Socket.....	353691	358	93 00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	352290	395	136 00
With Standard Film Socket without Bi-lux refractor.....	351911	380	116 00
With Mogul Multiple Socket and Bi-lux refractor.....	351912	395	135 00
With Mogul Multiple Socket without Bi-lux refractor.....	351913	380	132 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Paragon Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351914	380	\$116 00
With Mogul Multiple Socket.....	351915	380	115 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351916	400	138 00
With Standard Film Socket without Bi-lux refractor.....	351917	385	118 00
With Mogul Multiple Socket and Bi-lux refractor.....	351918	400	137 00
With Mogul Multiple Socket without Bi-lux refractor.....	353709	385	117 00

**With Egyptian Jr. Lighting Unit**

With Standard Film Socket.....	351919	370	105 00
With Mogul Multiple Socket.....	352525	370	104 00

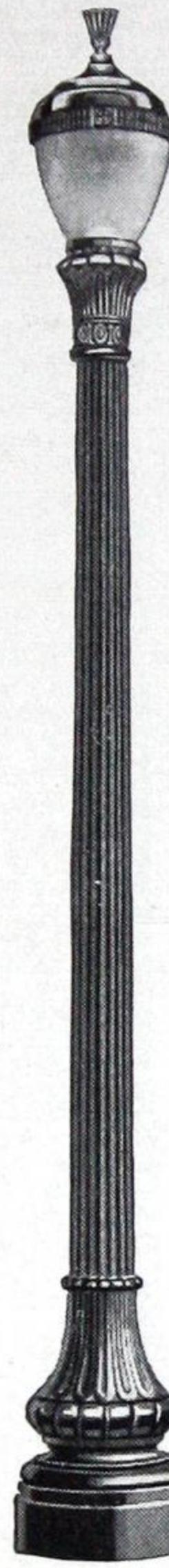
*Order by Style Number*

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

CONTINENTAL 11 STANDARDS\*



STYLE No. 351931



STYLE No. 351937



STYLE No. 351924



STYLE No. 352291

Description

Style No. Ship. Wt., Lb. List Price

<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>			
With Standard Film Socket and Bi-lux refractor.	351920	... \$157 00	
With Standard Film Socket without Bi-lux refractor.	351921	... 137 00	
With Mogul Multiple Socket and Bi-lux refractor.	351922	... 156 00	
With Mogul Multiple Socket without Bi-lux refractor.	351923	... 136 00	

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351924	... 137 00
With Mogul Multiple Socket.....	352526	... 136 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351925	... 135 00
With Mogul Multiple Socket.....	352527	... 134 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.	352291	... 176 00
With Standard Film Socket without Bi-lux refractor.	351926	... 156 00
With Mogul Multiple Socket and Bi-lux refractor.	351927	... 175 00
With Mogul Multiple Socket without Bi-lux refractor.	351928	... 155 00

The numeral following the name of standard indicates the approximate height in feet of the column only.

Style No. Ship. Wt., Lb. List Price

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351929	... \$156 00
With Mogul Multiple Socket.....	351930	... 155 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351931	... 214 00
With Standard Film Socket without Bi-lux refractor.....	351932	... 194 00
With Mogul Multiple Socket and Bi-lux refractor.....	351933	... 213 00
With Mogul Multiple Socket without Bi-lux refractor.....	350818	... 193 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351934	... 173 00
With Standard Film Socket without Bi-lux refractor.....	351935	... 153 00
With Mogul Multiple Socket and Bi-lux refractor.....	351936	... 172 00
With Mogul Multiple Socket without Bi-lux refractor.....	350824	... 152 00

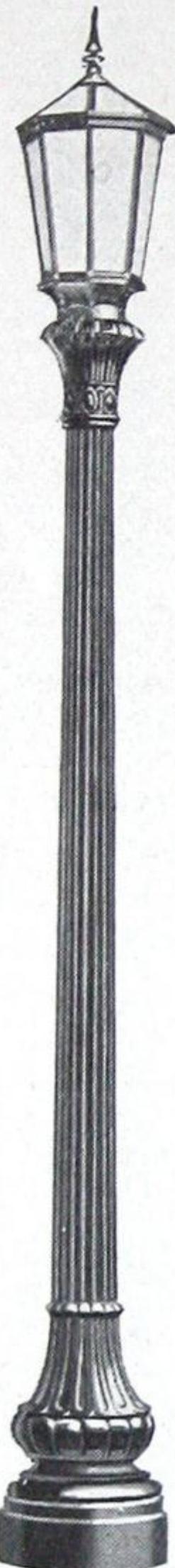
**With Egyptian Sr. Lighting Unit**

With Standard Film Socket.....	351937	... 146 00
With Mogul Multiple Socket.....	352528	... 145 00

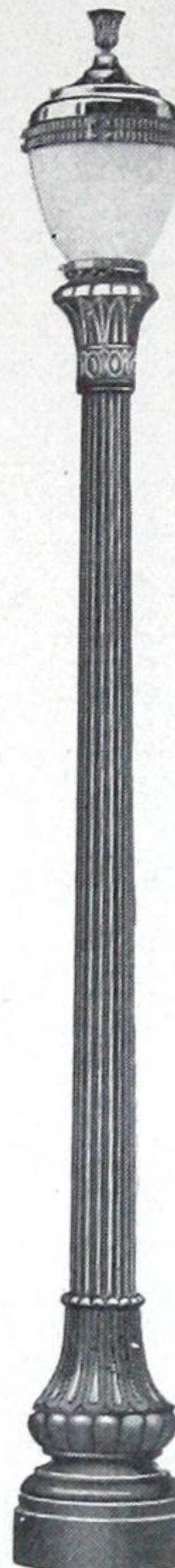
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

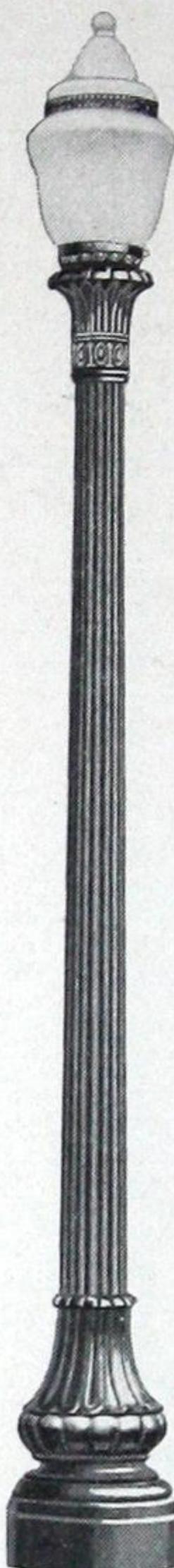
## CONTINENTAL 10 STANDARDS\*



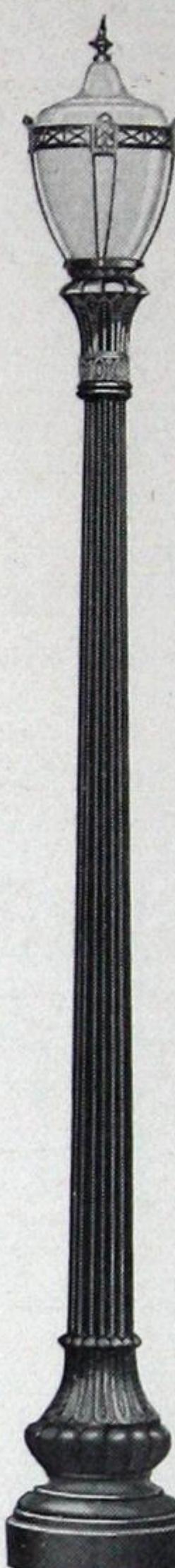
STYLE NO. 351951



STYLE NO. 351957



STYLE NO. 351942



STYLE NO. 351944

## Description

## Style No. Ship. Wt., Lb. List Price

<b>With Sol-Lux Sr. Rectilinear Globe and Canopy</b>			
With Standard Film Socket and Bi-lux refractor.....	351938	... \$132 00	
With Standard Film Socket without Bi-lux refractor.....	351939	... 112 00	
With Mogul Multiple Socket and Bi-lux refractor.....	351940	... 131 00	
With Mogul Multiple Socket without Bi-lux refractor.....	351941	... 111 00	

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351942	... 112 00
With Mogul Multiple Socket.....	350849	... 111 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351943	... 110 00
With Mogul Multiple Socket.....	341827	... 109 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351944	... 151 00
With Standard Film Socket without Bi-lux refractor.....	351945	... 131 00
With Mogul Multiple Socket and Bi-lux refractor.....	351946	... 150 00
With Mogul Multiple Socket without Bi-lux refractor.....	351947	... 130 00

## Description

## Style No. Ship. Wt., Lb. List Price

<b>With Paragon Sr. Monax Globe and Canopy</b>			
With Standard Film Socket.....	351948	... \$131 00	
With Mogul Multiple Socket.....	351950	... 130 00	

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351951	... 189 00
With Standard Film Socket without Bi-lux refractor.....	351952	... 169 00
With Mogul Multiple Socket and Bi-lux refractor.....	351953	... 188 00
With Mogul Multiple Socket without Bi-lux refractor.....	350859	... 168 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	351954	... 148 00
With Standard Film Socket without Bi-lux refractor.....	351955	... 128 00
With Mogul Multiple Socket and Bi-lux refractor.....	351956	... 147 00
With Mogul Multiple Socket without Bi-lux refractor.....	350865	... 127 00

**With Egyptian Sr. Lighting Unit**

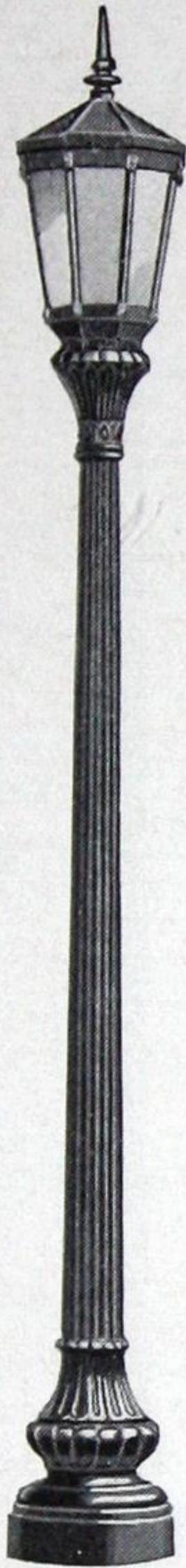
With Standard Film Socket.....	351957	... 121 00
With Mogul Multiple Socket.....	350872	... 120 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

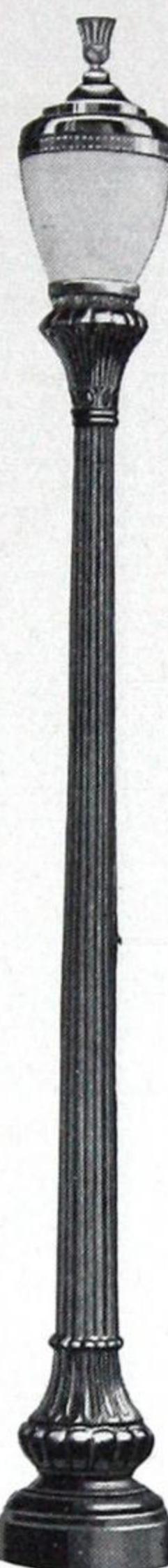
*Order by Style Number*

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

CONTINENTAL 9 STANDARDS\*



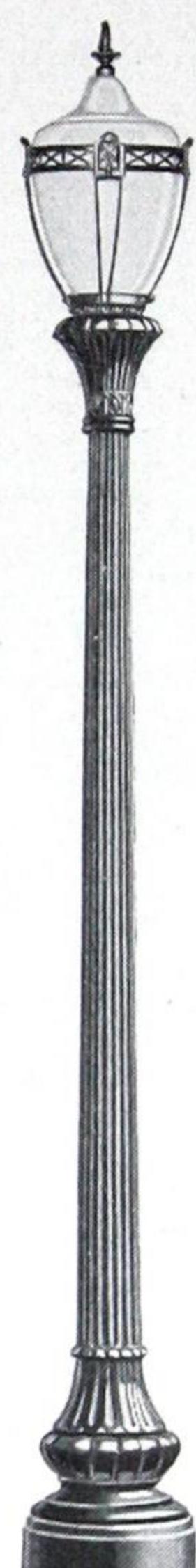
STYLE No. 352922



STYLE No. 351969



STYLE No. 351960



STYLE No. 351962

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Sol-Lux Jr. Rectilinear Globe and Canopy**

With Standard Film Socket.....	351958	375	\$85 00
With Mogul Multiple Socket.....	351959	375	84 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351960	375	85 00
With Mogul Multiple Socket.....	350891	375	84 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351961	373	83 00
With Mogul Multiple Socket.....	341830	373	82 00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351962	400	125 00
With Standard Film Socket without Bi-lux refractor.....	351963	375	105 00
With Mogul Multiple Socket and Bi-lux refractor.....	351964	400	124 00
With Mogul Multiple Socket without Bi-lux refractor.....	351965	375	104 00

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Paragon Jr. Monax Globe and Canopy**

With Standard Film Socket.....	351966	375	\$105 00
With Mogul Multiple Socket.....	351967	375	104 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	352292	450	127 00
With Standard Film Socket without Bi-lux refractor.....	352293	425	107 00
With Mogul Multiple Socket and Bi-lux refractor.....	351968	450	126 00
With Mogul Multiple Socket without Bi-lux refractor.....	350903	425	106 00

**With Egyptian Jr. Lighting Unit**

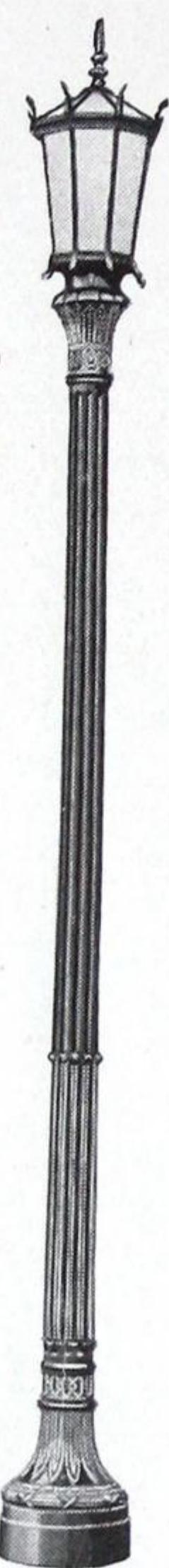
With Standard Film Socket.....	351969	375	94 00
With Mogul Multiple Socket.....	350911	375	93 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

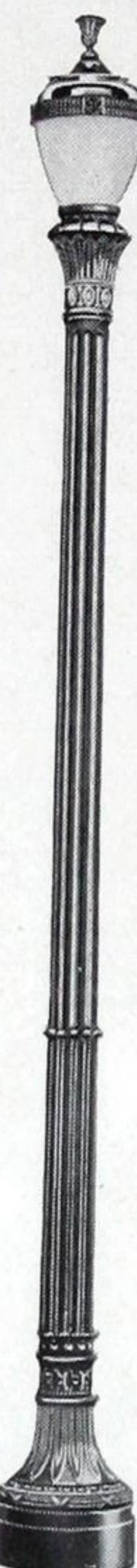
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

## CAPITAL 15 STANDARDS\*



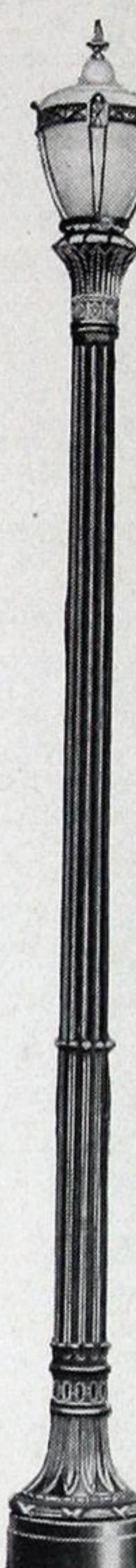
STYLE No. 352304



STYLE No. 351988



STYLE No. 351974



STYLE No. 352294

## Description

Style No. Ship. Wt., Lb. List Price

## With Sol-Lux Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor.....	351970	762	\$176 00
With Standard Film Socket without Bi-lux refractor.....	351971	747	156 00
With Mogul Multiple Socket and Bi-lux refractor.....	351972	762	175 00
With Mogul Multiple Socket without Bi-lux refractor.....	351973	747	155 00

## With Sol-Lux Sr. Monax Globe and Canopy

With Standard Film Socket.....	351974	747	156 00
With Mogul Multiple Socket.....	351975	747	155 00

## With Sol-Lux Sr. Monax Globe, Metal Canopy

With Standard Film Socket.....	351976	745	154 00
With Mogul Multiple Socket.....	351977	745	153 00

## With Egyptian Sr. Lighting Unit

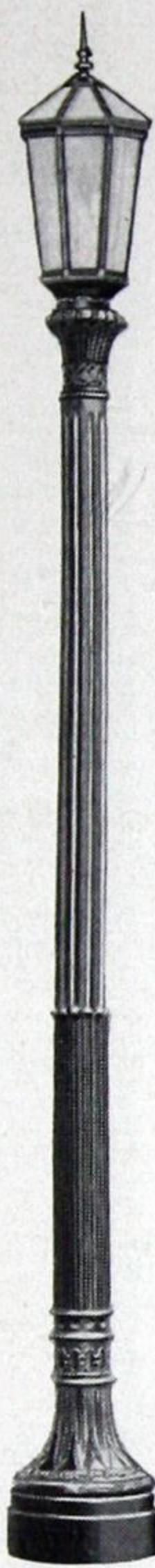
With Standard Film Socket.....	351988	762	165 00
With Mogul Multiple Socket.....	351989	762	166 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

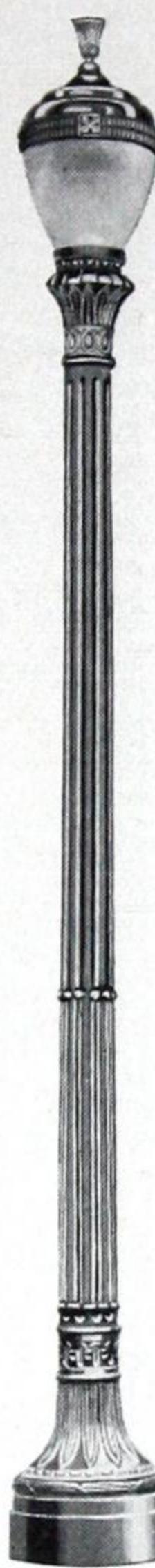
*Order by Style Number*

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

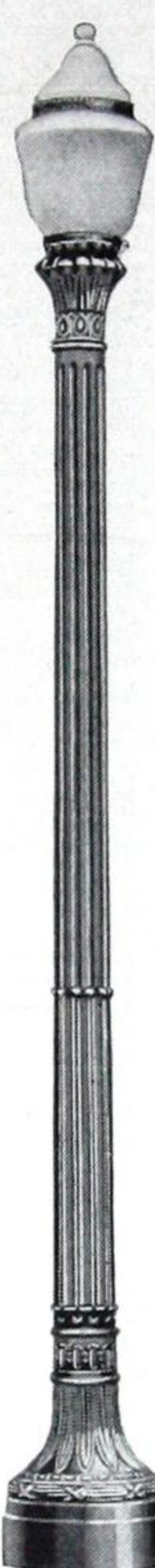
## CAPITAL 12 STANDARDS\*



STYLE No. 352002



STYLE No. 352008



STYLE No. 351994



STYLE No. 351996

## Description

Style No. Ship. Wt., Lb. List Price

**With Sol-Lux Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351990	610	\$157 00
With Standard Film Socket without Bi-lux refractor.....	351991	595	137 00
With Mogul Multiple Socket and Bi-lux refractor.....	351992	610	156 00
With Mogul Multiple Socket without Bi-lux refractor.....	351993	595	136 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	351994	595	137 00
With Mogul Multiple Socket.....	350925	595	136 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	351995	593	135 00
With Mogul Multiple Socket.....	341842	593	134 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	351996	625	176 00
With Standard Film Socket without Bi-lux refractor.....	351997	610	156 00
With Mogul Multiple Socket and Bi-lux refractor.....	351998	625	175 00
With Mogul Multiple Socket without Bi-lux refractor.....	351999	610	155 00

## Description

Style No. Ship. Wt., Lb. List Price

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352000	610	\$156 00
With Mogul Multiple Socket.....	352001	610	155 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	352002	640	214 00
With Standard Film Socket without Bi-lux refractor.....	352003	625	194 00
With Mogul Multiple Socket and Bi-lux refractor.....	352004	640	213 00
With Mogul Multiple Socket without Bi-lux refractor.....	350935	625	193 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	352005	625	173 00
With Standard Film Socket without Bi-lux refractor.....	352006	610	153 00
With Mogul Multiple Socket and Bi-lux refractor.....	352007	625	172 00
With Mogul Multiple Socket without Bi-lux refractor.....	350941	610	152 00

**With Egyptian Sr. Lighting Unit**

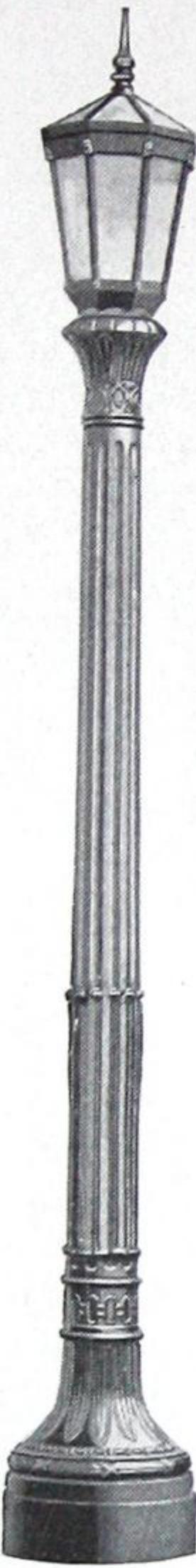
With Standard Film Socket.....	352008	600	146 00
With Mogul Multiple Socket.....	350948	600	145 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

Order by Style Number

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

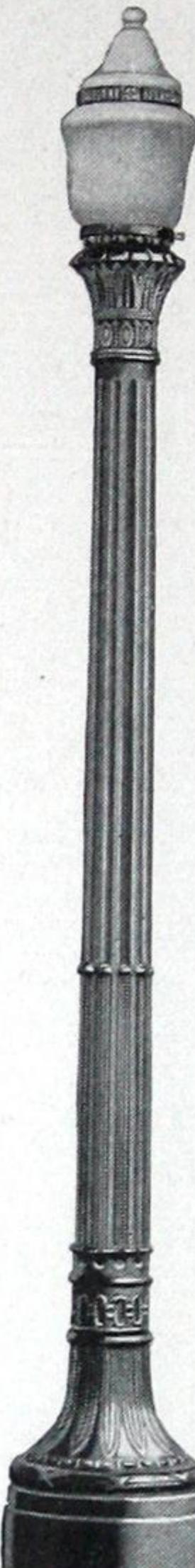
## CAPITAL 10 STANDARDS\*



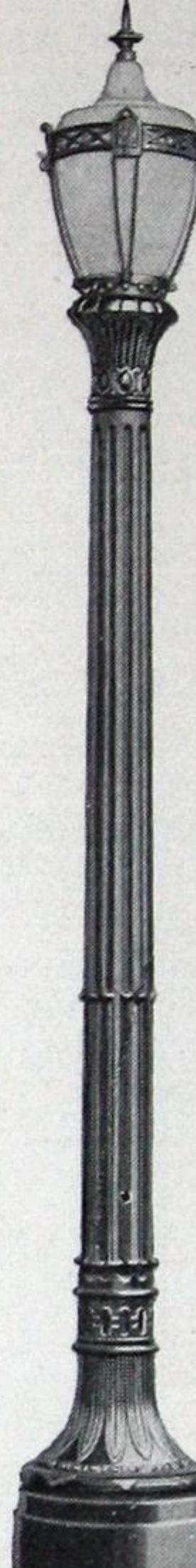
STYLE NO. 352021



STYLE NO. 352024



STYLE NO. 352013



STYLE NO. 352296

## Description

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Sol-Lux Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	352009	543	\$147 00
With Standard Film Socket without Bi-lux refractor.....	352010	528	127 00
With Mogul Multiple Socket and Bi-lux refractor.....	352011	543	146 00
With Mogul Multiple Socket without Bi-lux refractor.....	352012	528	126 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	352013	528	127 00
With Mogul Multiple Socket.....	352546	528	126 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352014	526	125 00
With Mogul Multiple Socket.....	352547	526	124 00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor.....	352296	518	166 00
With Standard Film Socket without Bi-lux refractor.....	352015	503	146 00
With Mogul Multiple Socket and Bi-lux refractor.....	352016	518	165 00
With Mogul Multiple Socket without Bi-lux refractor.....	352017	503	145 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Paragon Jr. Monax Globe and Canopy**

With Standard Film Socket.....	352018	503	\$146 00
With Mogul Multiple Socket.....	352019	503	145 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	352302	533	204 00
With Standard Film Socket without Bi-lux refractor.....	352303	518	184 00
With Mogul Multiple Socket and Bi-lux refractor.....	352020	533	203 00
With Mogul Multiple Socket without Bi-lux refractor.....	350976	518	183 00

**With Octagonal Jr. Lighting Unit**

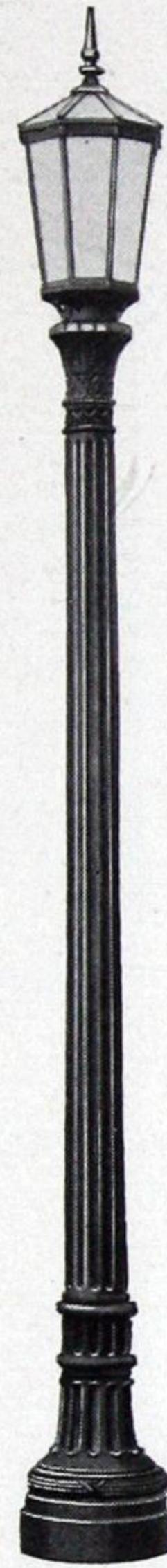
With Standard Film Socket and Bi-lux refractor.....	352021	518	163 00
With Standard Film Socket without Bi-lux refractor.....	352022	503	143 00
With Mogul Multiple Socket and Bi-lux refractor.....	352023	518	162 00
With Mogul Multiple Socket without Bi-lux refractor.....	350982	503	142 00

**With Egyptian Jr. Lighting Unit**

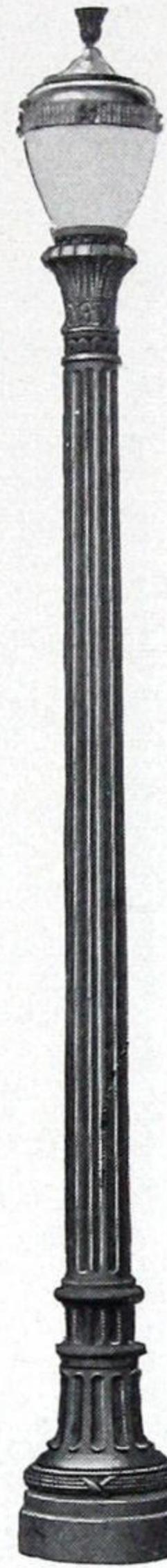
With Standard Film Socket.....	352024	493	136 00
With Mogul Multiple Socket.....	352548	493	135 00

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

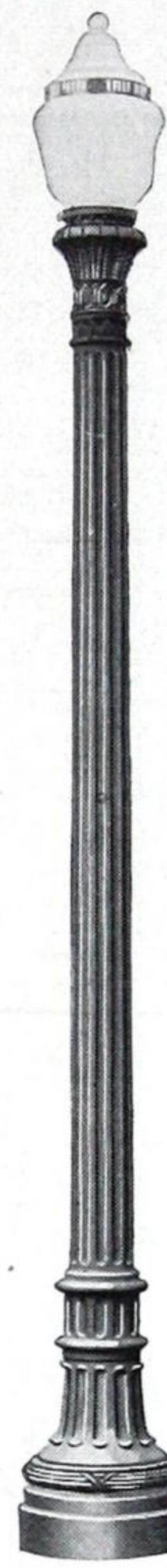
## BROADWAY 12 STANDARDS\*



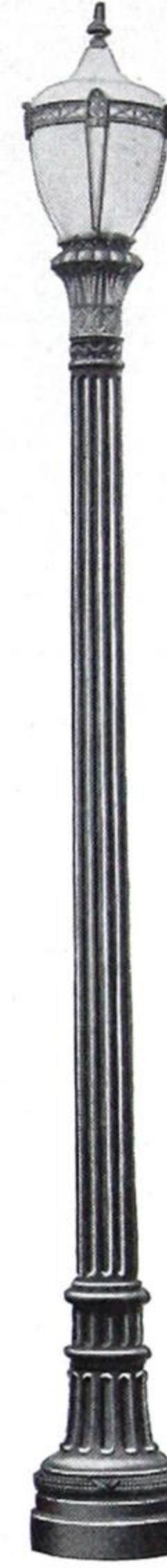
STYLE No. 352036



STYLE No. 352042



STYLE No. 352030



STYLE No. 352034

## Description

## Style No. Ship. Wt., Lb. List Price

## With Sol-Lux Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor	352025	664	\$157 00
With Standard Film Socket without Bi-lux refractor	352026	649	137 00
With Mogul Multiple Socket and Bi-lux refractor	352027	664	156 00
With Mogul Multiple Socket without Bi-lux refractor	352028	649	136 00

## With Sol-Lux Sr. Monax Globe and Canopy

With Standard Film Socket.....	352029	649	137 00
With Mogul Multiple Socket.....	351007	649	136 00

## With Sol-Lux Sr. Monax Globe, Metal Canopy

With Standard Film Socket.....	352030	647	135 00
With Mogul Multiple Socket.....	351854	647	134 00

## With Paragon Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor	352297	679	176 00
With Standard Film Socket without Bi-lux refractor	352031	664	156 00
With Mogul Multiple Socket and Bi-lux refractor	352032	679	175 00
With Mogul Multiple Socket without Bi-lux refractor	352033	664	155 00

\*The numeral following the name of standard indicates the approximate height in feet of column only.

## Order by Style Number

## Description

## Style No. Ship. Wt., Lb. List Price

## With Paragon Sr. Monax Globe and Canopy

With Standard Film Socket.....	352034	664	\$156 00
With Mogul Multiple Socket.....	352035	664	155 00

## With Octagonal Sr. Lighting Unit

With Standard Film Socket and Bi-lux refractor	352036	694	214 00
With Standard Film Socket without Bi-lux refractor	352037	679	194 00
With Mogul Multiple Socket and Bi-lux refractor	352038	694	213 00
With Mogul Multiple Socket without Bi-lux refractor	351017	679	193 00

## With Octagonal Jr. Lighting Unit

With Standard Film Socket and Bi-lux refractor	352039	679	173 00
With Standard Film Socket without Bi-lux refractor	352040	664	153 00
With Mogul Multiple Socket and Bi-lux refractor	352041	679	172 00
With Mogul Multiple Socket without Bi-lux refractor	351023	664	152 00

## With Egyptian Sr. Lighting Unit

With Standard Film Socket.....	352042	654	146 00
With Mogul Multiple Socket.....	351030	654	145 00

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

## BROADWAY 10 STANDARDS\*



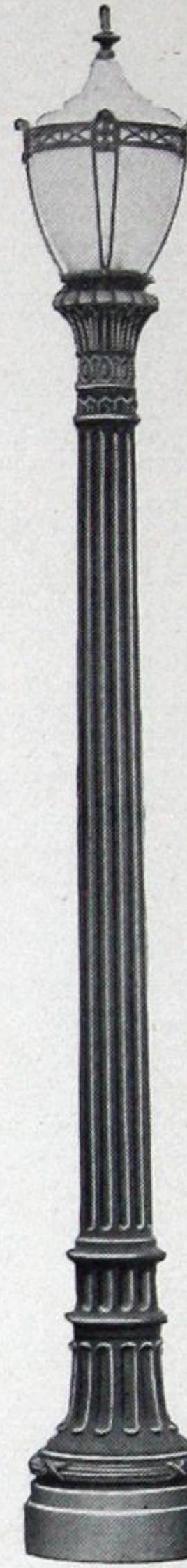
STYLE No. 352054



STYLE No. 352060



STYLE No. 352047



STYLE No. 352048

## Description

Style No. Ship. Wt., Lb. List Lb. Price

## With Sol-Lux Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor	352043	520	\$152	00
With Standard Film Socket without Bi-lux refractor	352044	505	132	00
With Mogul Multiple Socket and Bi-lux refractor	352298	520	151	00
With Mogul Multiple Socket without Bi-lux refractor	352045	505	131	00

## With Sol-Lux Sr. Monax Globe and Canopy

With Standard Film Socket.....	352046	505	132	00
With Mogul Multiple Socket.....	351049	505	131	00

## With Sol-Lux Sr. Monax Globe, Metal Canopy

With Standard Film Socket.....	352047	503	130	00
With Mogul Multiple Socket.....	341860	503	129	00

## With Paragon Sr. Rectilinear Globe and Canopy

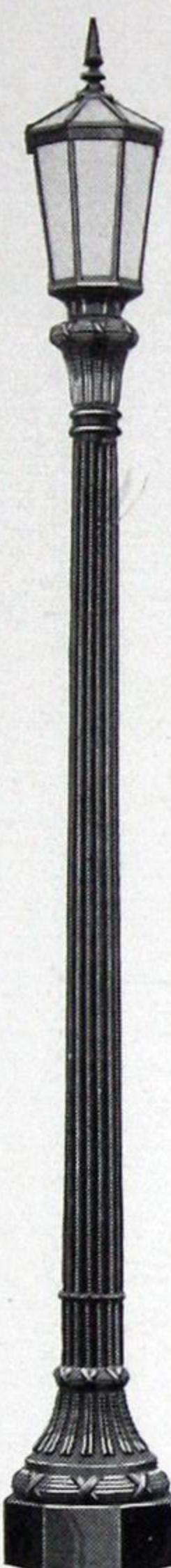
With Standard Film Socket and Bi-lux refractor	352048	535	171	00
With Standard Film Socket without Bi-lux refractor	352049	520	151	00
With Mogul Multiple Socket and Bi-lux refractor	352050	535	170	00
With Mogul Multiple Socket without Bi-lux refractor	352051	520	150	00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

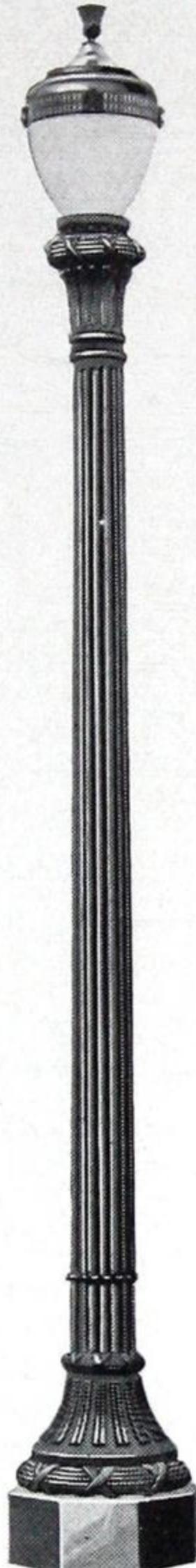
*Order by Style Number*

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

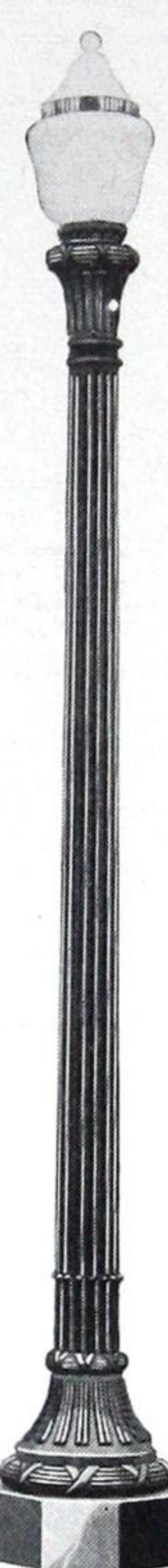
GRAND VIEW 12 STANDARDS\*



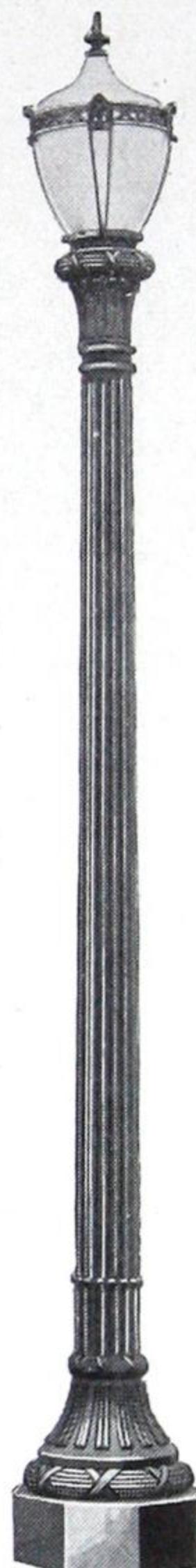
STYLE No. 352072



STYLE No. 352078



STYLE No. 352065



STYLE No. 352299

Description

Style No. Ship. Wt., Lb. List Price

**With Sol-Lux Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor	352061	597	\$171 00
With Standard Film Socket without Bi-lux refractor	352062	582	151 00
With Mogul Multiple Socket and Bi-lux refractor	352063	597	170 00
With Mogul Multiple Socket without Bi-lux refractor	352064	582	150 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352065	582	151 00
With Mogul Multiple Socket.....	351094	582	150 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352066	580	149 00
With Mogul Multiple Socket.....	351089	580	148 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor	352299	612	190 00
With Standard Film Socket without Bi-lux refractor	352067	597	170 00
With Mogul Multiple Socket and Bi-lux refractor	352068	612	189 00
With Mogul Multiple Socket without Bi-lux refractor	352069	597	169 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

Description

Style No. Ship. Wt., Lb. List Price

**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352070	597	\$170 00
With Mogul Multiple Socket.....	352071	597	169 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor	352072	627	228 00
With Standard Film Socket without Bi-lux refractor	352073	612	208 00
With Mogul Multiple Socket and Bi-lux refractor	352074	627	227 00
With Mogul Multiple Socket without Bi-lux refractor	351104	612	207 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor	352075	612	191 00
With Standard Film Socket without Bi-lux refractor	352076	597	171 00
With Mogul Multiple Socket and Bi-lux refractor	352077	612	190 00
With Mogul Multiple Socket without Bi-lux refractor	351110	597	170 00

**With Egyptian Sr. Lighting Unit**

With Standard Film Socket.....	352078	587	160 00
With Mogul Multiple Socket.....	351117	587	159 00

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

## VISTA 12 STANDARDS\*



STYLE No. 352094



STYLE No. 352097



STYLE No. 352084



STYLE No. 352085

## Description

## Style No.

## Ship. Wt., Lb.

## List Price

## With Sol-Lux Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor	352079	395	\$132 00
With Standard Film Socket without Bi-lux refractor	352080	380	112 00
With Mogul Multiple Socket and Bi-lux refractor	352081	395	131 00
With Mogul Multiple Socket without Bi-lux refractor	352082	380	111 00

## With Sol-Lux Sr. Monax Globe and Canopy

With Standard Film Socket.....	352083	380	112 00
With Mogul Multiple Socket.....	351137	380	111 00

## With Sol-Lux Sr. Monax Globe, Metal Canopy

With Standard Film Socket.....	352084	378	110 00
With Mogul Multiple Socket.....	351132	378	109 00

## With Paragon Sr. Rectilinear Globe and Canopy

With Standard Film Socket and Bi-lux refractor	352085	410	151 00
With Standard Film Socket without Bi-lux refractor	352086	395	131 00
With Mogul Multiple Socket and Bi-lux refractor	352087	410	150 00
With Mogul Multiple Socket without Bi-lux refractor	352088	395	130 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

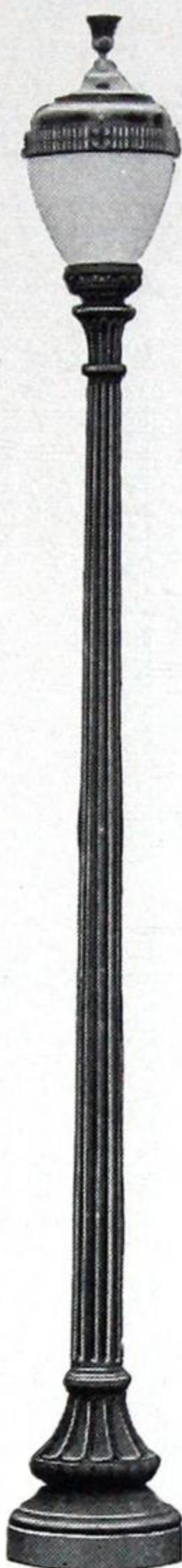
*Order by Style Number*

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

VILLA 11 STANDARDS\*



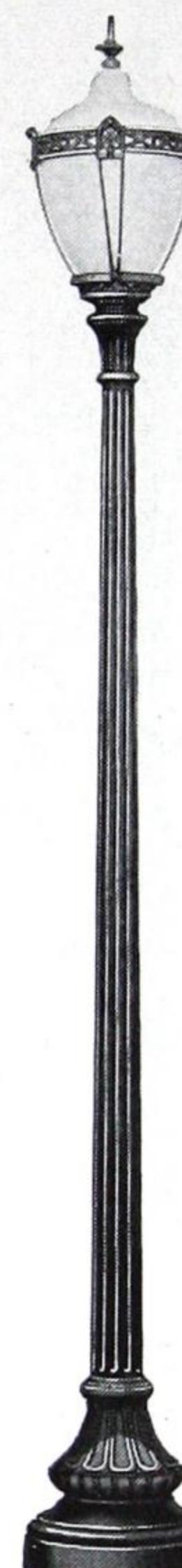
STYLE No. 352109



STYLE No. 352115



STYLE No. 352102



STYLE No. 352300

Description

Style No.	Ship. Wt., Lb.	List Price
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**With Sol-Lux Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor	352098	460	\$118 00
With Standard Film Socket without Bi-lux refractor	352099	445	98 00
With Mogul Multiple Socket and Bi-lux refractor	352100	460	117 00
With Mogul Multiple Socket without Bi-lux refractor	352101	445	97 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352102	445	98 00
With Mogul Multiple Socket.....	351181	445	97 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352103	443	96 00
With Mogul Multiple Socket.....	351176	443	95 00

**With Paragon Sr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor	352300	475	137 00
With Standard Film Socket without Bi-lux refractor	352104	460	117 00
With Mogul Multiple Socket and Bilux refractor	352105	475	136 00
With Mogul Multiple Socket without Bi-lux refractor	352106	460	116 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Paragon Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352107	460	\$117 00
With Mogul Multiple Socket.....	352108	460	116 00

**With Octagonal Sr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor	352109	490	175 00
With Standard Film Socket without Bi-lux refractor	352110	475	155 00
With Mogul Multiple Socket and Bi-lux refractor	352111	490	174 00
With Mogul Multiple Socket without Bi-lux refractor	351191	475	154 00

**With Octagonal Jr. Lighting Unit**

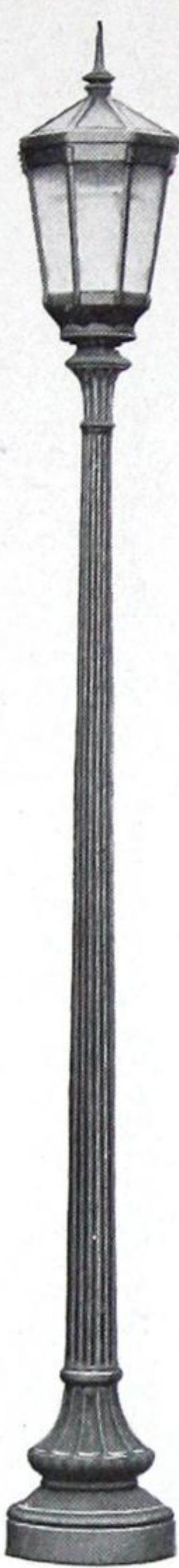
With Standard Film Socket and Bi-lux refractor	352112	475	134 00
With Standard Film Socket without Bi-lux refractor	352113	460	114 00
With Mogul Multiple Socket and Bi-lux refractor	352114	475	133 00
With Mogul Multiple Socket without Bi-lux refractor	351197	460	113 00

**With Egyptian Sr. Lighting Unit**

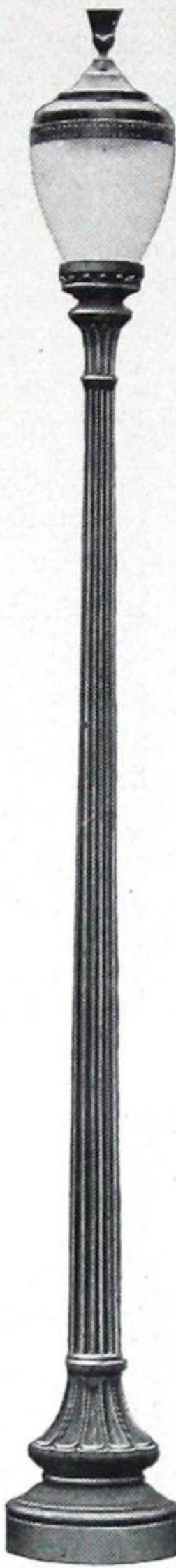
With Standard Film Socket.....	352115	450	107 00
With Mogul Multiple Socket.....	352537	450	106 00

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

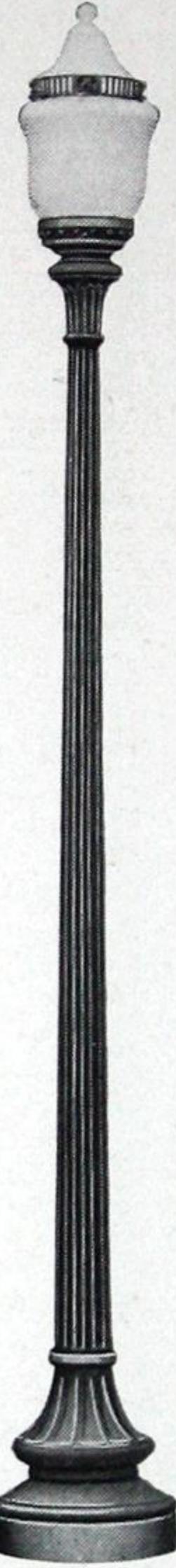
## VILLA 9 STANDARDS\*



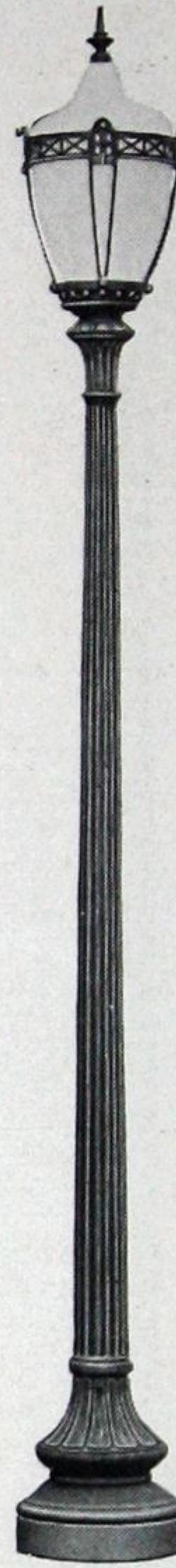
STYLE No. 352140



STYLE No. 352144



STYLE No. 352132



STYLE No. 352134

## Description

Style Ship. List  
No. Wt., Lb. Price**With Sol-Lux Jr. Rectilinear Globe and Canopy**

With Standard Film Socket.....	352130	285	\$90 00
With Mogul Multiple Socket.....	352131	285	89 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	352132	285	90 00
With Mogul Multiple Socket.....	351257	285	89 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352133	283	88 00
With Mogul Multiple Socket.....	351254	283	87 00

**With Egyptian Jr. Lighting Unit**

With Standard Film Socket.....	352144	290	99 00
With Mogul Multiple Socket.....	351263	290	98 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

## Description

Style Ship. List  
No. Wt., Lb. Price**With Paragon Jr. Rectilinear Globe and Canopy**

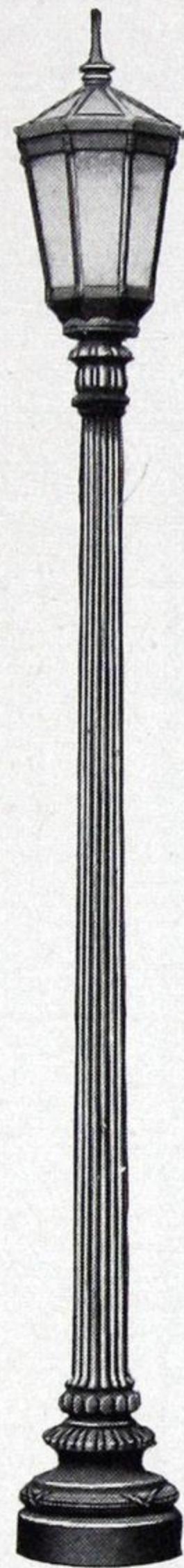
With Standard Film Socket and Bi-lux refractor.....	352134	310	\$130 00
With Standard Film Socket without Bi-lux refractor.....	352135	295	110 00
With Mogul Multiple Socket and Bi-lux refractor.....	352136	310	129 00
With Mogul Multiple Socket without Bi-lux refractor.....	352137	295	109 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor.....	352140	320	132 00
With Standard Film Socket without Bi-lux refractor.....	352141	305	112 00
With Mogul Multiple Socket and Bi-lux refractor.....	352142	320	131 00
With Mogul Multiple Socket without Bi-lux refractor.....	352143	305	111 00

SINGLE-LIGHT CAST-IRON STANDARDS—Continued

PARK VIEW 9 STANDARDS\*



STYLE No. 352126



STYLE No. 352129



STYLE No. 352118



STYLE No. 352120

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Sol-Lux Jr. Rectilinear Globe and Canopy**

With Standard Film Socket.....	352116	302	\$85 00
With Mogul Multiple Socket.....	352117	302	84 00

**With Sol-Lux Jr. Monax Globe and Canopy**

With Standard Film Socket.....	352118	302	85 00
With Mogul Multiple Socket.....	351224	302	84 00

**With Sol-Lux Jr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352119	300	83 00
With Mogul Multiple Socket.....	341708	300	82 00

**With Paragon Jr. Rectilinear Globe and Canopy**

With Standard Film Socket and Bi-lux refractor	352120	332	125 00
With Standard Film Socket without Bi-lux refractor	352121	317	105 00
With Mogul Multiple Socket and Bi-lux refractor	352122	332	124 00
With Mogul Multiple Socket without Bi-lux refractor	352123	317	104 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

Description	Style No.	Ship. Wt., Lb.	List Price
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**With Paragon Jr. Monax Globe and Canopy**

With Standard Film Socket.....	352124	317	\$105 00
With Mogul Multiple Socket.....	352125	317	104 00

**With Octagonal Jr. Lighting Unit**

With Standard Film Socket and Bi-lux refractor	352126	337	127 00
With Standard Film Socket without Bi-lux refractor	352127	322	107 00
With Mogul Multiple Socket and Bi-lux refractor	352128	337	126 00
With Mogul Multiple Socket without Bi-lux refractor	351236	322	106 00

**With Egyptian Jr. Lighting Unit**

With Standard Film Socket.....	352129	307	94 00
With Mogul Multiple Socket.....	352536	307	93 00

## SINGLE-LIGHT CAST-IRON STANDARDS—Continued

## CALIFORNIA 13 STANDARDS\*



STYLE NO. 352518



STYLE NO. 352506



STYLE NO. 352512

**With Sol-Lux Sr. Rectilinear Globe and Canopy**

Description	Style No.	Ship. Wt. Lb., Ea.	List Price
With Standard Film Socket and Bi-lux refractor.....	352502	912	\$215 00
With Standard Film Socket without Bi-lux refractor.....	352503	897	195 00
With Mogul Multiple Socket and Bi-lux refractor.....	352504	912	214 00
With Mogul Multiple Socket without Bi-lux refractor .....	352505	897	194 00

**With Sol-Lux Sr. Monax Globe and Canopy**

With Standard Film Socket.....	352506	897	195 00
With Mogul Multiple Socket.....	352507	897	194 00

**With Sol-Lux Sr. Monax Globe, Metal Canopy**

With Standard Film Socket.....	352508	895	193 00
With Mogul Multiple Socket.....	352509	895	192 00

**With Egyptian Sr. Lighting Unit**

With Standard Film Socket.....	352510	900	204 00
With Mogul Multiple Socket.....	352511	900	203 00

**With Paragon Sr. Rectilinear Globe and Canopy**

Description	Style No.	Ship. Wt. Lb., Ea.	List Price
With Standard Film Socket and Bi-lux refractor.....	352512	925	\$234 00
With Standard Film Socket without Bi-lux refractor.....	352513	910	214 00
With Mogul Multiple Socket and Bi-lux refractor.....	352514	925	233 00
With Mogul Multiple Socket without Bi-lux refractor.....	352515	910	213 00

**With Paragon Sr. Monax Globe and Canopy**

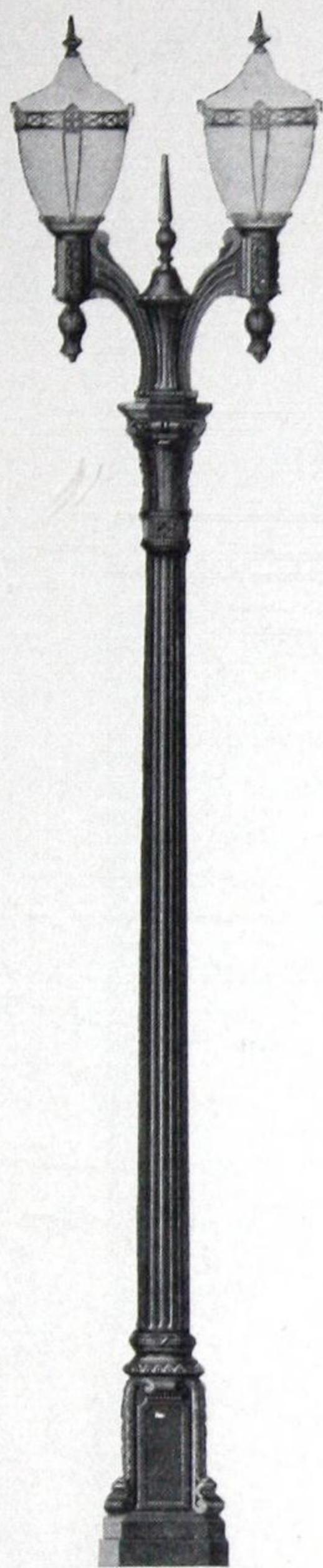
With Standard Film Socket.....	352516	910	214 00
With Mogul Multiple Socket.....	352517	910	213 00

**With Octagonal Sr. Lighting Unit**

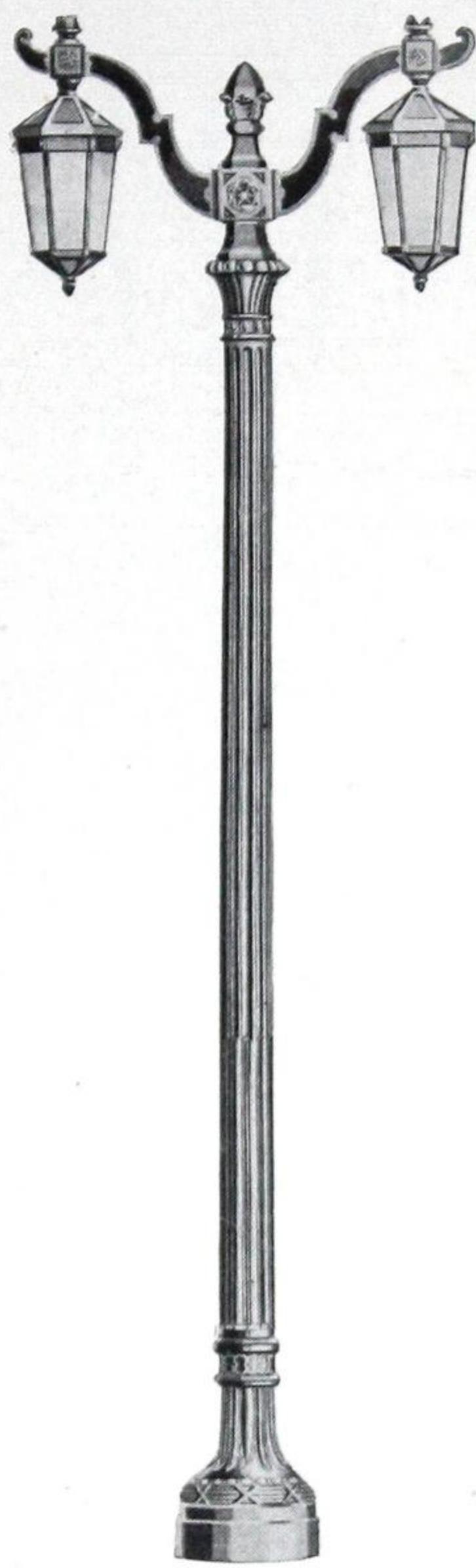
With Standard Film Socket and Bi-lux refractor.....	352518	940	272 00
With Standard Film Socket without Bi-lux refractor.....	352519	925	252 00
With Mogul Multiple Socket and Bi-lux refractor.....	352520	940	271 00
With Mogul Multiple Socket without Bi-lux refractor.....	352521	925	251 00

\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

**TWO-LIGHT CAST-IRON STANDARDS**

CALIFORNIA 17 2-LIGHT STANDARD WITH  
PARAGON SR. LIGHTING UNITS



SANTIAGO 17 2-LIGHT STANDARD WITH  
OCTAGONAL JR. PENDANTS



ARCADIAN 16 2-LIGHT STANDARD WITH SOL-LUX  
SR. LIGHTING UNITS

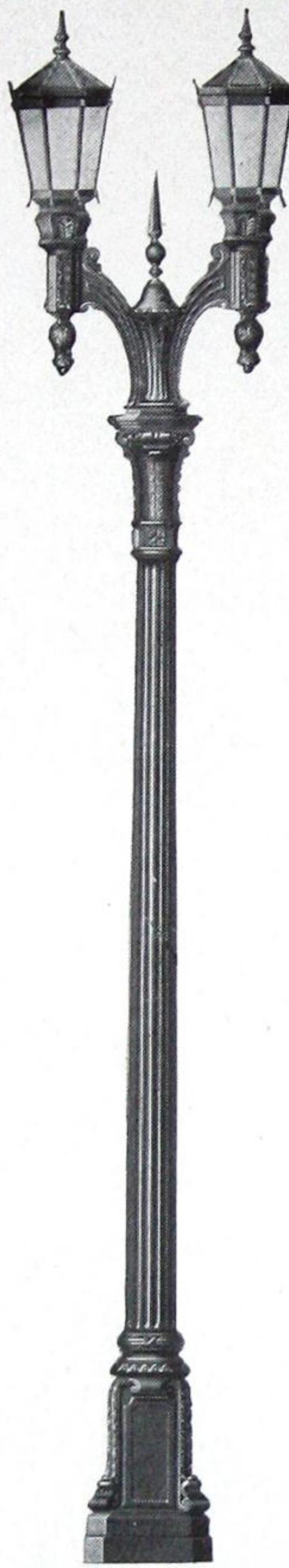
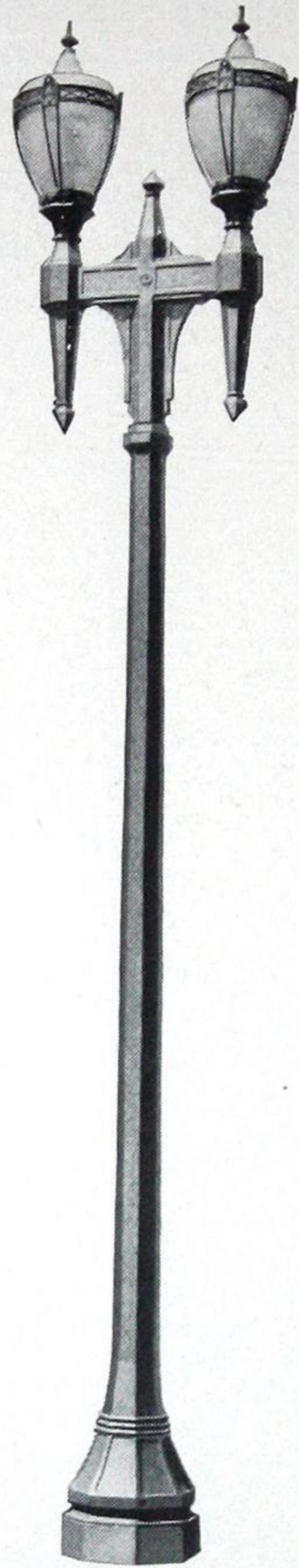
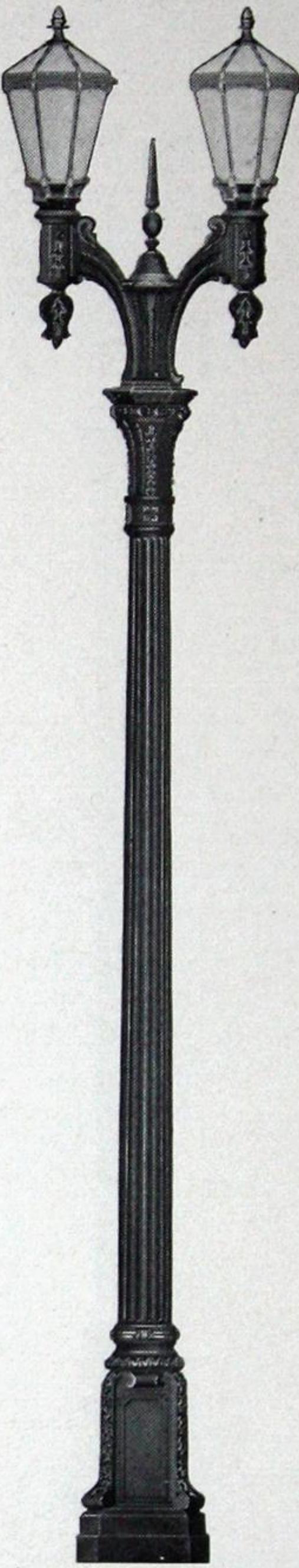
Two-light standards have been designed to meet the growing demand for Super Whiteway lighting units of high intensity. They are generally installed on exceptionally wide and important business streets and civic centers. They meet the demand for units which will provide ample illumination and a dignified appearance on the finest of metropolitan thoroughfares.

The types of two-light standards illustrated are similar in design to the single-light units listed on previous pages. This allows both single and two-light standards to be used in close proximity without interrupting the harmony of design and appearance. It also has economic advantages since all parts of the equipment are standard and interchangeable.

On the Santiago standard the light units are pendent. This design has many attractive features and produces a very efficient distribution. When desired one arm may be omitted.

Any type of lighting unit may be used on these standards, with or without refractors, as desired. Lighting units and casings are not included in the list prices. For prices and descriptions of lighting units see pages 891 to 896.

## TWO-LIGHT CAST-IRON STANDARDS—Continued

CALIFORNIA 17 2-LIGHT STANDARD WITH  
OCTAGONAL JR. LIGHTING UNITSEDGEWATER 17 2-LIGHT STANDARD WITH  
PARAGON SR. LIGHTING UNITSCALIFORNIA 17 2-LIGHT STANDARD WITH  
OCTAGONAL JR. LIGHTING UNITS

## LIST PRICES

## Description

Santiago 17 2-light standard*	.....	.....	.....
Arcadian 16 2-light standard*	.....	.....	.....
Edgewater 17 2-light standard*	.....	.....	.....
California 17 2-light standard*	.....	.....	.....

Ship. Wt.			
Style No.	Lb. Ea.	List Price	
352390	876	\$250 00	
352391	642	175 00	
352392	875	200 00	
352393	1066	300 00	

\*The numeral following the name of standard indicates the approximate height in feet of the point at which lighting unit is attached.

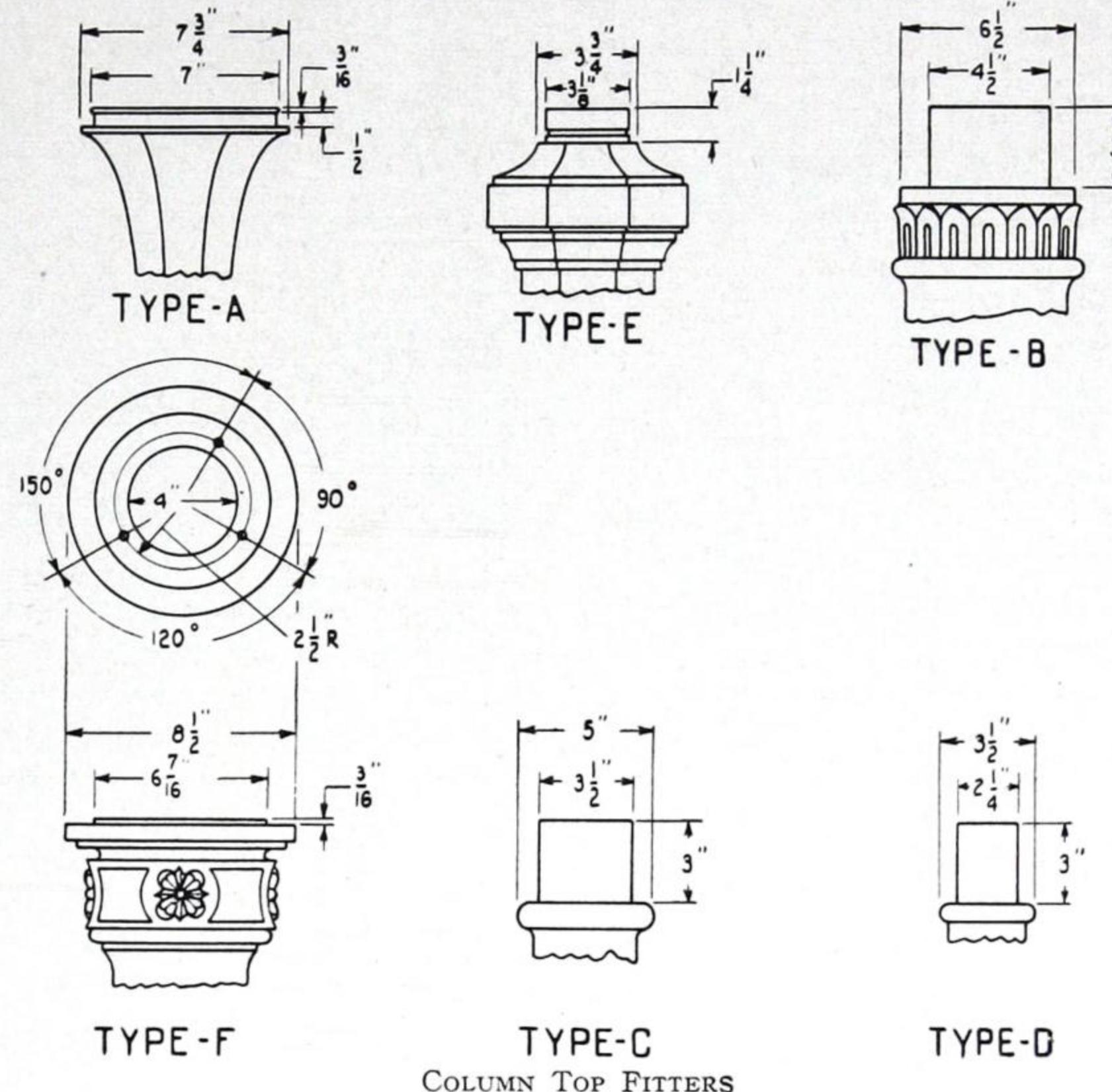
*Order by Style Number*

## COLUMNS

A complete ornamental cast-iron street-lighting unit consists of a base and a column, preferably cast in one piece, surmounted by the casing or globe-holder and the lighting unit or post top. Auxiliary equipment for the lamps and wiring are necessary detail parts to make the unit complete.

The standards should have a base large enough to give stability without occupying excess space on the sidewalk. The column should have gracefully tapering lines so that when cast integral with the base it forms a standard with correct proportions throughout.

Each column is arranged to support a casing at the top. Different standards have different methods of fitting the casing. The various fitters are designated by a letter. This letter appears in the table below to indicate the type of fitter used at the top of each style of column.



COLUMN TOP FITTERS

## LIST PRICES

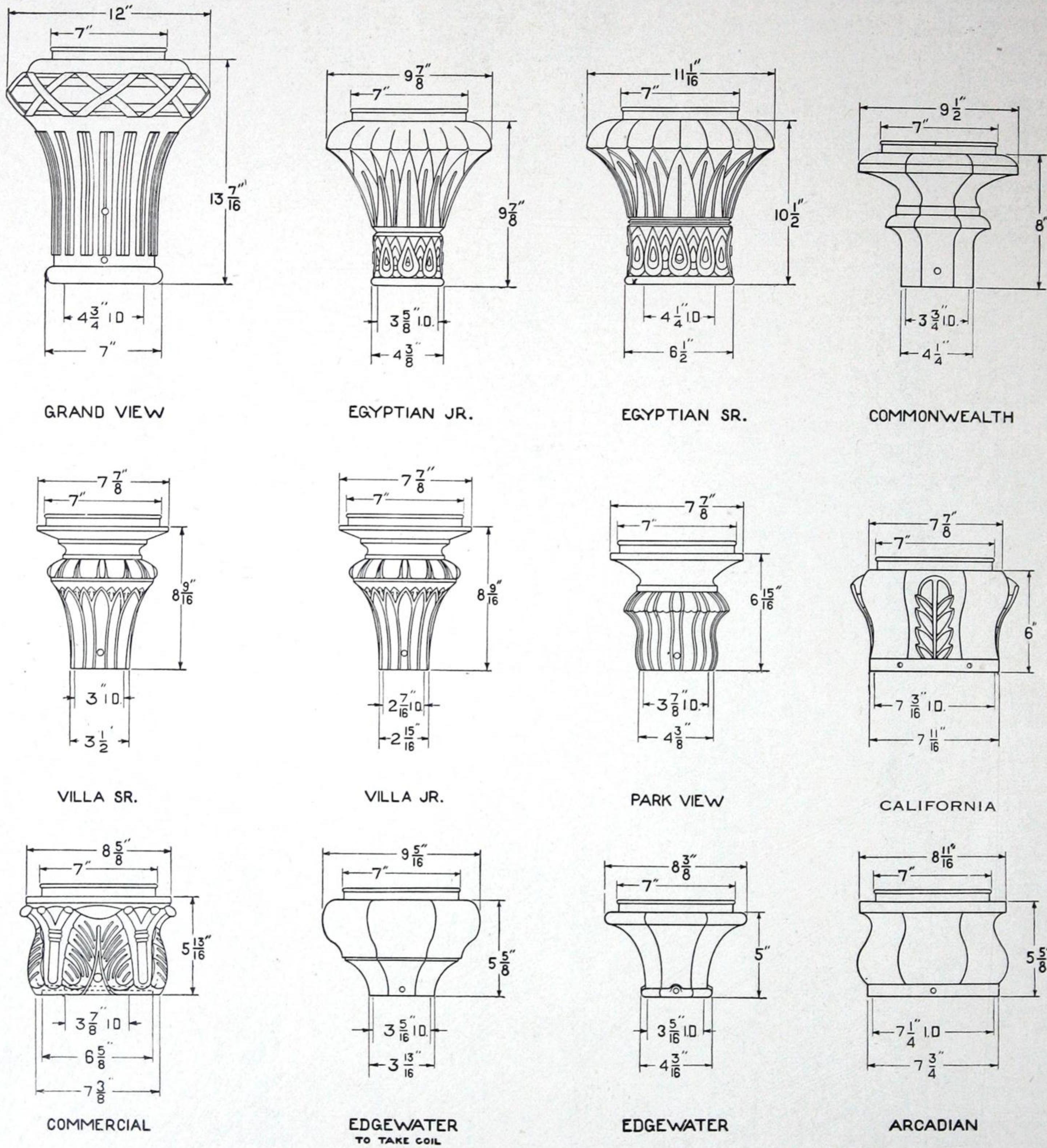
### Street Lighting Columns

Name of Column	Shape of Base	BASE		Type of Top Fitter	Style No.	Ship. Wt. Lb. Ea.	List Price
		Dia. Inches	Ht. Inches				
Arcadian 15	Octagonal	20	..	A	345902	560	\$110 00
Arcadian 12	Octagonal	20	..	A	339838	412	78 00
Arcadian 10	Octagonal	16	..	A	353978	250	61 00
Edgewater 15	Octagonal	20	..	E	345905	655	110 00
Edgewater 12	Octagonal	20	..	E	350379	435	78 00
Edgewater 10	Octagonal	18	..	E	336529	314	68 00
Continental 11	Round	20	31	B	336009	537	106 00
Continental 10	Round	18	28	B	336311	425	81 00
Continental 9	Round	16	21	C	336016	248	60 00
Commercial 11	Octagonal	21	31	F	339002	450	107 00
Commercial 10	Octagonal	18	25	F	352989	316	71 00
Capitol 15	Round	20	32	B	345903A	705	125 00
Capitol 12	Round	20	31	B	336022A	540	106 00
Capitol 10	Round	18	31	B	336102	433	96 00
Broadway 12	Round	20	32	B	352810	595	106 00
Broadway 11	Round	20	32	B	335752	450	101 00
Park View 9	Round	16	17	C	335747	252	60 00
Villa 11	Round	19	21	A	353739	310	67 00
Villa 9	Round	17	18	A	336029	235	65 00
Grand View 13	Octagonal	22	26	B	353737	529	121 00
Vista 12	Round	17	34	F	353738	350	81 00
Boulevard 12	Round	14	34	C	335553	240	59 00
Riverside 12	Round	18	47	C	335542	380	67 00
Commonwealth 12	Square	18	24	C	335794	410	81 00
Edgewater 17 Two-light	Octagonal	20	20	..	345941	675	110 00
Arcadian 16 Two-light	Octagonal	20	..	..	345902	565	110 00
Arcadian 13 Two-light	Octagonal	20	..	A	339838	412	78 00
Capitol 17 Two-light	Round	20	32	B	345903A	705	125 00
Capitol 15 Two-light	Round	20	31	B	336022A	540	106 00
California 17 Two-light	Square	20	34	..	354055	822	121 00

### Newel Columns

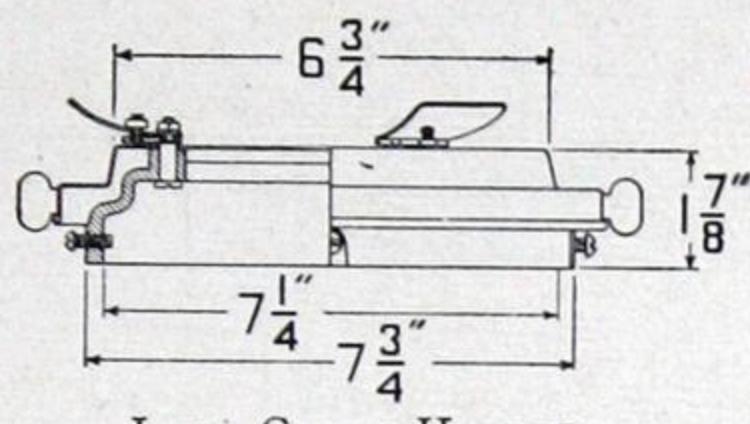
Arcadian 8	Octagonal	16	..	A	339886	200	61 00
Arcadian 6	Octagonal	12	..	A	337984	180	51 00
Arcadian 4	Octagonal	12	..	A	354061	150	41 00
Metropolitan 6	Square	14	24	C	336099	200	65 00
Edgewater 6	Octagonal	18	18	E	354143	200	67 00
Sol-Lux 5	Round	14	24	C	335924	150	48 00
Sol-Lux 3	Round	14	24	C	335923	125	36 00
Commerce 5	Rectangular	21x35	..	B	335583	300	75 00

Order by Style Number

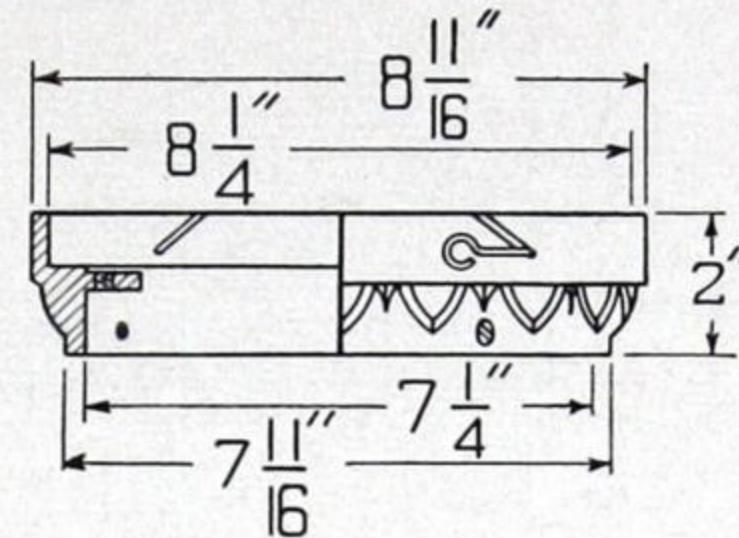
**CASINGS FOR CAST-IRON STANDARDS**

Dimensions are for reference only. For official dimensions apply to the nearest district office.

CASINGS FOR CAST-IRON STANDARDS—Continued



JIFFY GLOBE-HOLDER



SOL-LUX GLOBE-HOLDER

Casings of various designs have been developed to harmonize with the ornamental standard and the lighting unit. Some casings have sufficient clearance on the inside to accommodate auto-transformers or reactance coils. The larger types as a rule will accommodate various transformer combinations.

Due to the variety of both column and casing designs, care should be used in the selection of casings to insure proper combinations. Unsuitable combinations will not fit mechanically. The bottom of the casing is arranged to fit certain definite types of top fitters on the column. In the list of casings below, the letters in the second column indicate the type of

column top fitter on which each casing may be used.

The casing has a flange at the top which has the same diameter as the Type A top fitter on columns. All lighting units are arranged to fit over this flange. It will be noted that lighting units can be mounted on Type A columns without the use of a casing.

### LIST PRICES

#### CASINGS

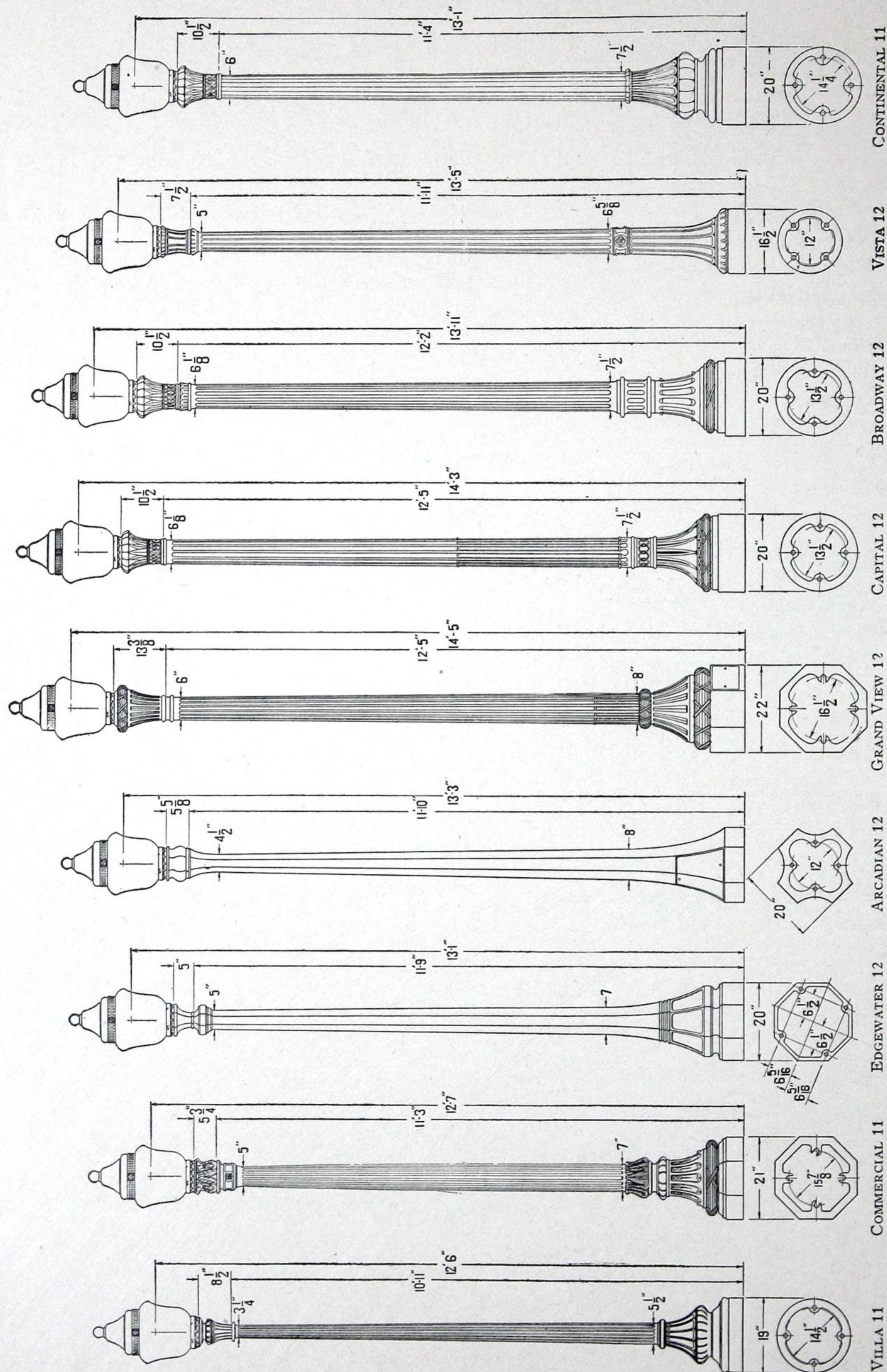
Name of Casing	Type of Column Top Fitter	Additive Heights of Casing, Inches	Style No.	Ship. Wt., Lb.	List Price
Grand View (without globe ring).....	B	17 7/8	353736	81	\$6 00
Egyptian Junior (without globe ring).....	C	9 3/4	336293	40	6 00
Egyptian Senior (without globe ring).....	B	10 3/4	336294	47	6 00
Commonwealth.....	C	8	351522	33	6 00
Villa Senior.....	D	8 1/2	353757	33	6 00
Villa Junior.....	D	8 1/2	353782	33	6 00
Park View (without globe ring).....	C	6 1/4	351381	33	6 00
California.....	A	6	351491	34	6 00
Commercial (without globe ring).....	F	5 1/2	353423	39	6 00
Edgewater (large, without globe ring).....	E	5 5/8	351382	35	6 00
Edgewater (small, without globe ring).....	E	5	353387	35	4 00
Arcadian (without globe ring).....	A	5 3/4	350662	34	6 00

#### GLOBE-HOLDERS

Sol-Lux Globe-holder only.....	A	1	354140	3	2 00
Sol-Lux Globe-holder with adjustable socket support.....	A	1	354067	3	4 00
Jiffy Globe-holder for globes with 8-inch bottom fitters.....	A	1	346124	4	10 00
Jiffy Globe-holder for globes with 9 3/8-inch bottom fitters.....	A	1	346125	4	10 00

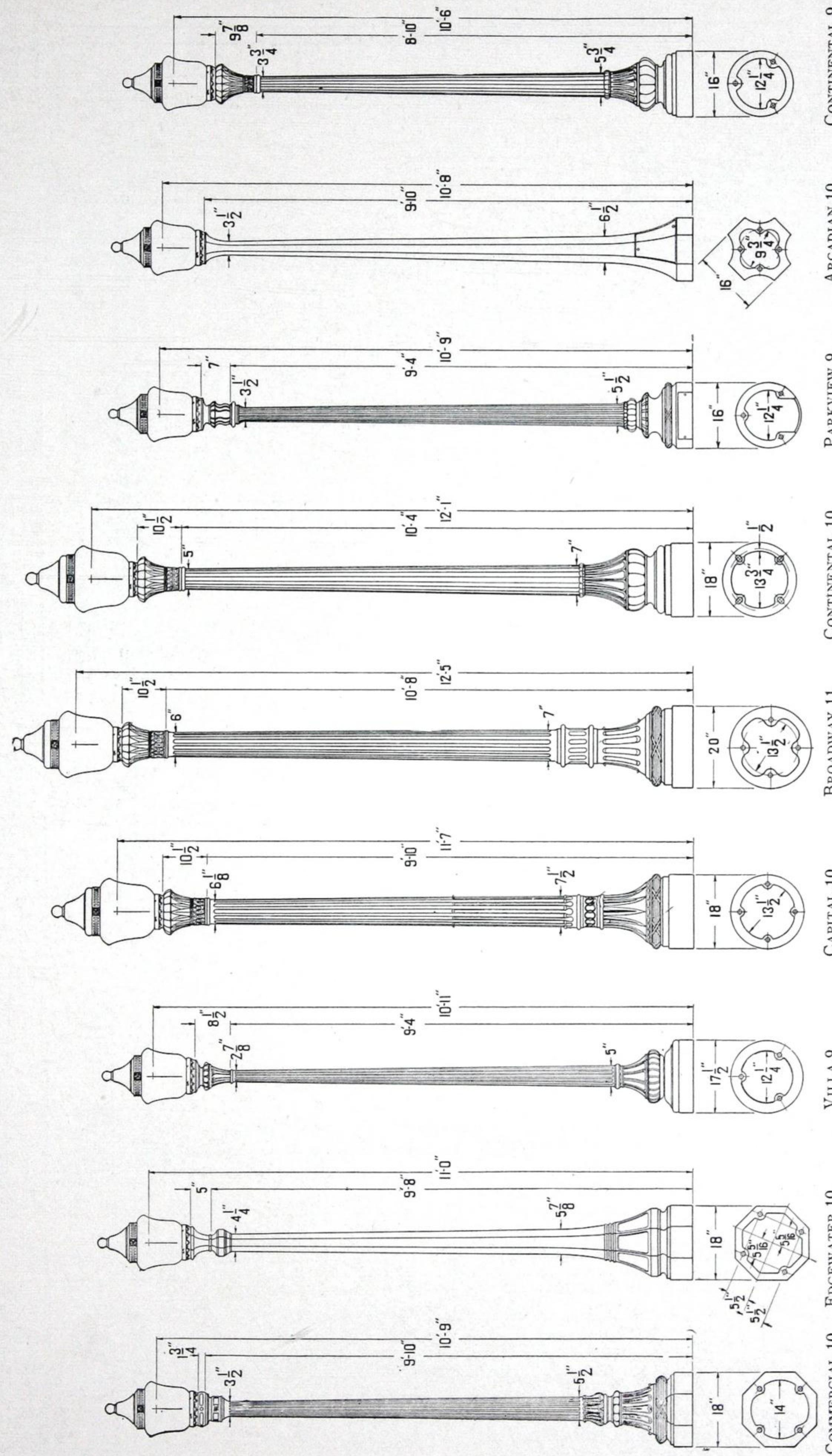
NOTE: For column data see page 863.

*Order by Style Number*

**DIMENSIONS OF STANDARDS**

Dimensions are for reference only. For official dimensions apply to the nearest district office.

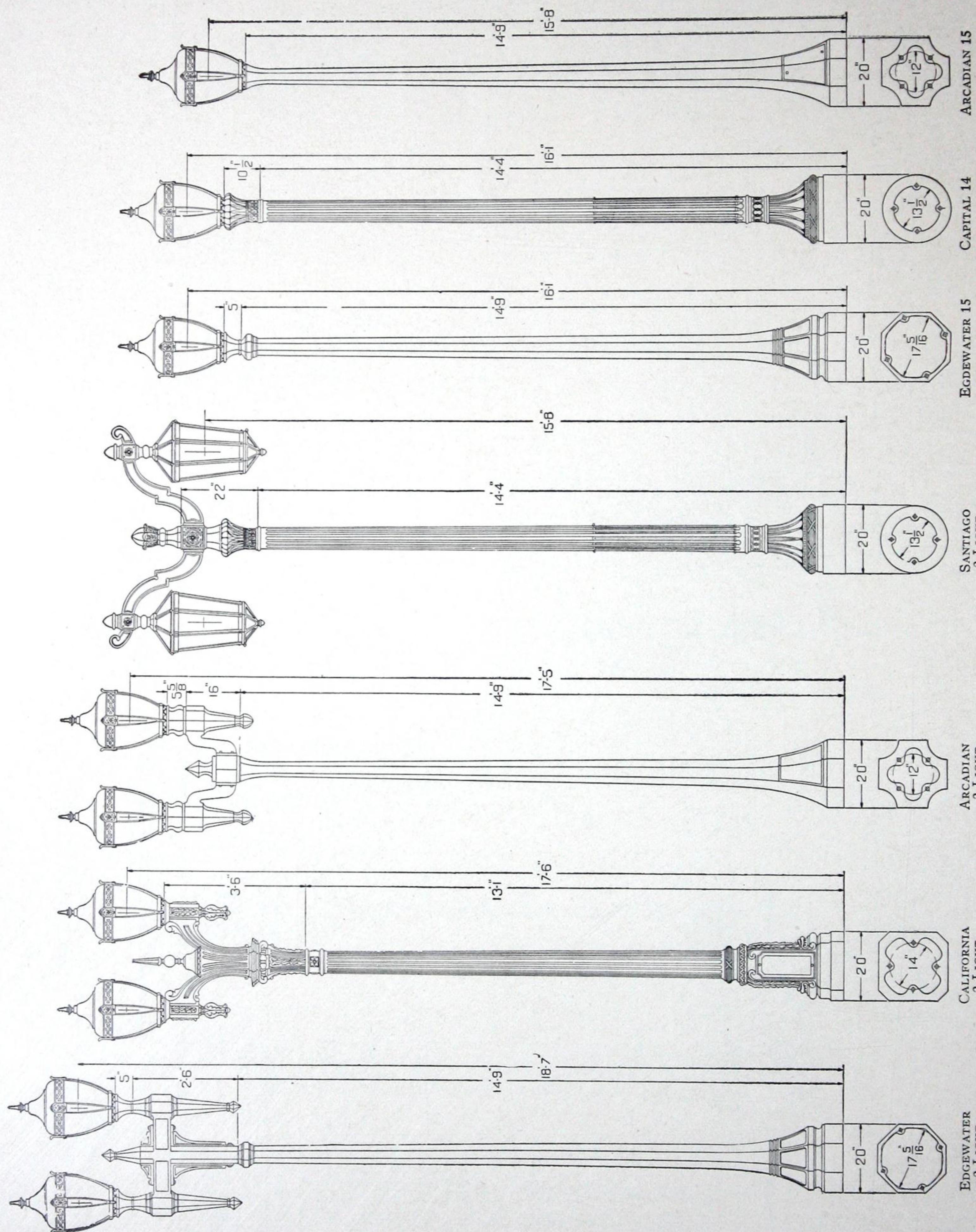
## DIMENSIONS OF STANDARDS—Continued



Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Ornamental Street Lighting Equipment*

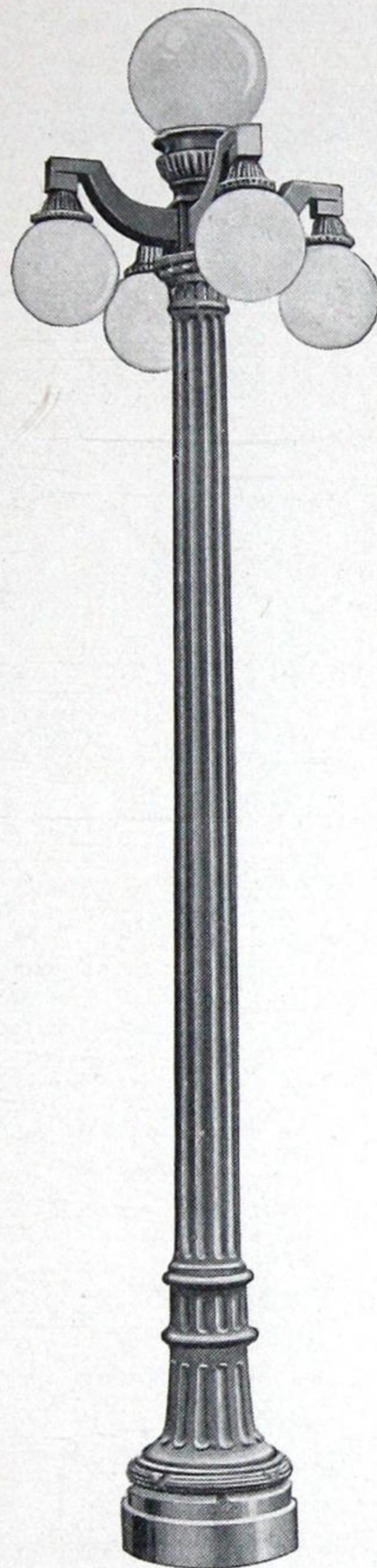
## DIMENSIONS OF STANDARDS—Continued



Dimensions are for reference only. For official dimensions apply to the nearest district office.

## CAST-IRON CLUSTER STANDARDS

### BROADWAY AND RIVERSIDE



BROADWAY



RIVERSIDE

While cluster-light standards are sometimes considered more decorative than single-light standards, their maintenance costs are much higher; their use is no longer considered economical for the lighting of streets. During recent years many cities where such equipment is used have converted them to single-light standards. All types of Westinghouse cluster-light standards are easily convertible to single-light standards at little cost. The saving in maintenance and operating charges thus effected will pay for the cost of conversion in six months.

#### Broadway Standard

Base, 20 inches in diameter, 2 feet 8 inches high. Column, 7½ inches in diameter above the base, tapering to 6⅛ inches in diameter near the top. Height from ground to bottom of pendent globes, 11 feet 7½ inches; to top of center globe, 15 feet; to top of globe on 1-light post, 14 feet. Distance from center to center of opposite globes, 32 inches. Pendent globes, 6x12 inches; top globe, 8x16 inches. Globe for 1-light post 8x16 inches. Use four ¾-inch x 15-inch foundation bolts.

List prices are given on next page.

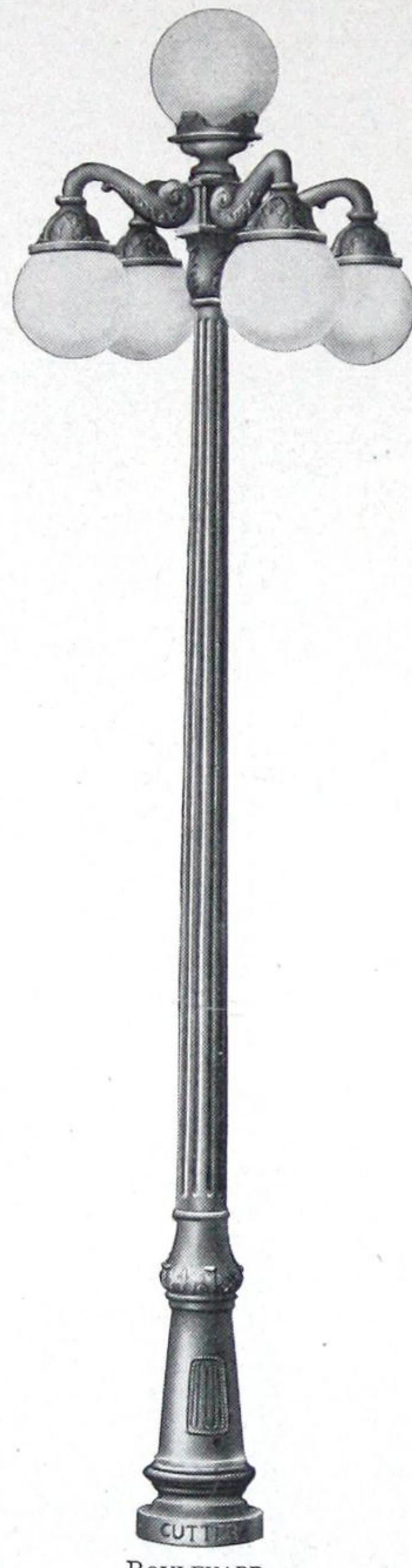
#### Riverside Standard

Base, 18 inches in diameter, 3 feet 6 inches high. Column, 8½ inches largest diameter, tapering to 3½ inches in diameter near the top. Height from ground to bottom of pendent globes, 11 feet; to top of top globe, 14 feet; to top of globe on the 1-light post, 13 feet 2 inches. Distance from center to center of opposite globes, 40 inches. All globes 8x12 inches, except for 1-light post, which is 8x16 inches. Use four ¾-inch x 15-inch foundation bolts.

List prices are given on next page.

## CAST-IRON CLUSTER STANDARDS—Continued

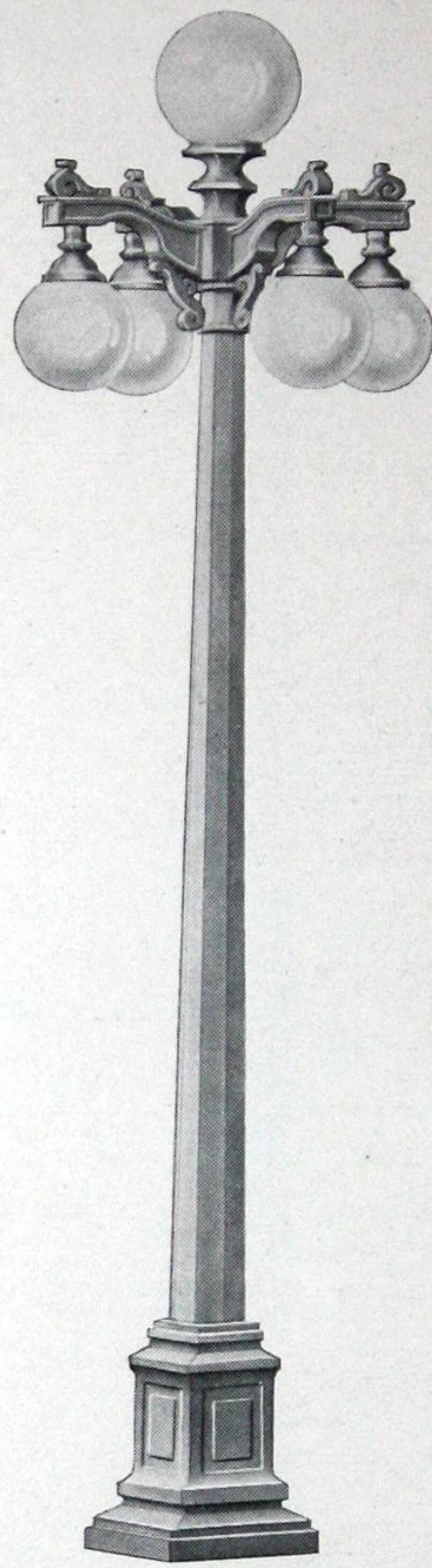
## BOULEVARD AND COMMONWEALTH



BOULEVARD

**Boulevard Standard**

Base, 14 inches diameter, 2 feet 10 inches high. Column, 5½ inches diameter above the base, tapering to 3½ inches diameter near the top. Height, from ground to bottom of pendent globes, 10 feet; to top of top globe, 13 feet 2 inches; to top of globe on the 1-light standard, 12 feet 7 inches. Distance from center to center of opposite globes, 32 inches. Pendent globes, 6x10 inches; top globe, 6x12 inches; globe for 1-light standard 8x14 inches. Use four ¾-inch x 15-inch foundation bolts.



COMMONWEALTH

**Commonwealth Standard**

Base, 18 inches square, 2 feet high. Column, 8 inches octagon above the base, tapering to 4 inches octagon near the top. Height from ground to bottom of pendent globes, 11 feet; to top of top globe, 14 feet 3 inches; to top of globe on the 1-light post, 13 feet 6 inches. Distance from center to center of opposite globes, 36 inches. Pendent globes, 6x12 inches; top globe, 8x14 inches; globe for 1-light post, 8x16 inches. Use four ¾-inch x 15-inch foundation bolts.

**LIST PRICES**

No. of Lights	Style No.	Ship. Wt., Lb. Ea.	List Price
<b>Broadway</b>			
1	343160	560	\$ 96 00
2	343161	650	118 00
3	343162	650	118 00
4	343163	700	140 00
5	343164	700	140 00
<b>Boulevard</b>			
1	340880	300	65 00
2	340881	335	87 00
3	340882	335	87 00
4	340883	375	100 00
5	340884	375	100 00

Prices of standards include medium multiple sockets but not globes, wiring or foundation bolts.

*Order by Style Number*

No. of Lights	Style No.	Ship. Wt., Lb. Ea.	List Price
<b>Riverside</b>			
1	340872	450	\$ 73 00
2	340873	500	103 00
3	340874	500	103 00
4	340875	585	122 00
5	340876	585	122 00
<b>Commonwealth</b>			
1	342968	475	87 00
2	342969	560	118 00
3	342970	560	118 00
4	342971	665	140 00
5	342972	665	140 00

## ORNAMENTAL CAST-IRON NEWELS



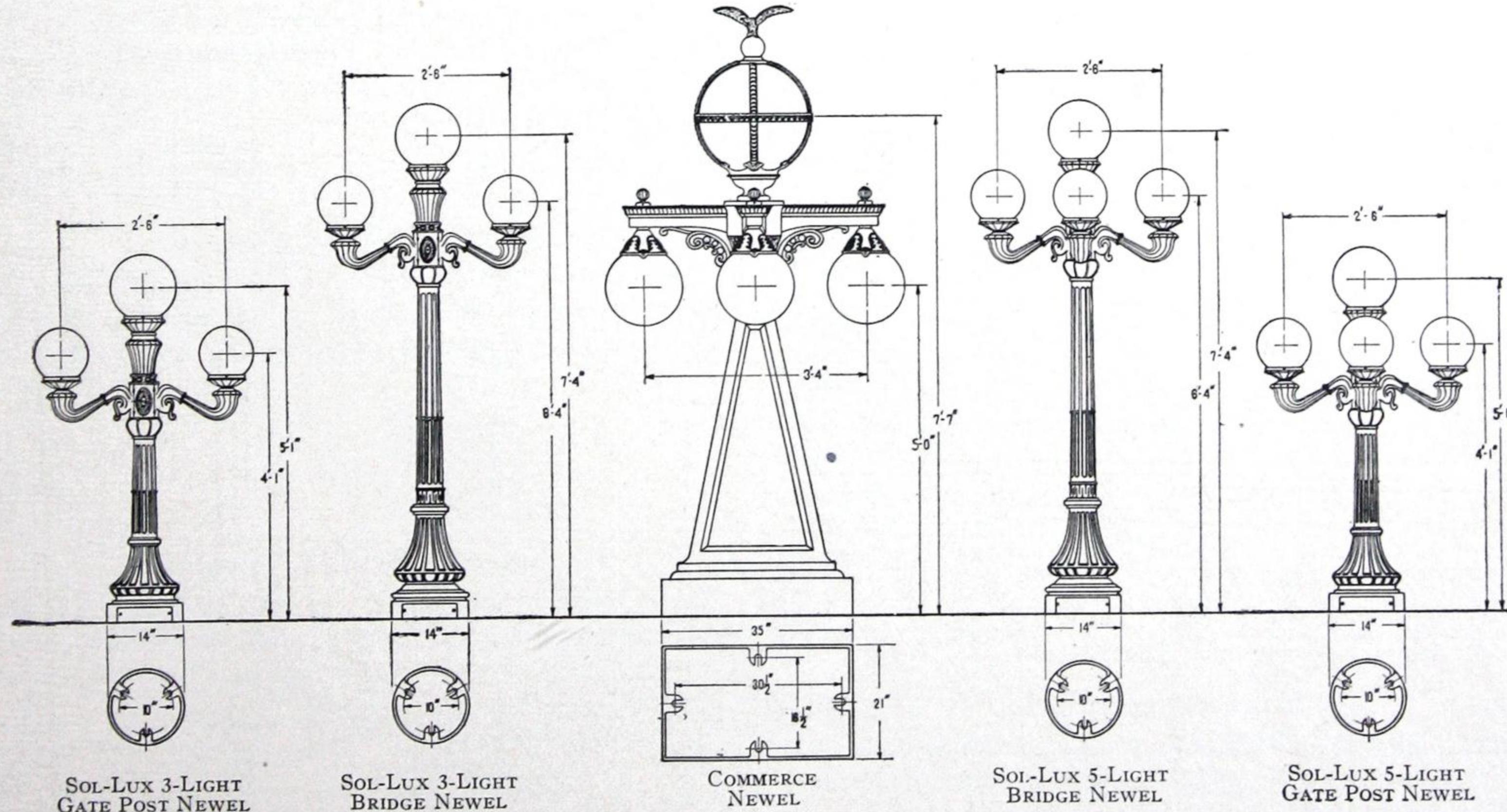
SOL-LUX 1-LIGHT  
GATE POST NEWEL

SOL-LUX 5-LIGHT  
GATE POST NEWEL

SOL-LUX 5-LIGHT  
BRIDGE NEWEL

SOL-LUX 3-LIGHT  
BRIDGE NEWEL

SOL-LUX 1-LIGHT  
BRIDGE NEWEL



SOL-LUX 3-LIGHT  
GATE POST NEWEL

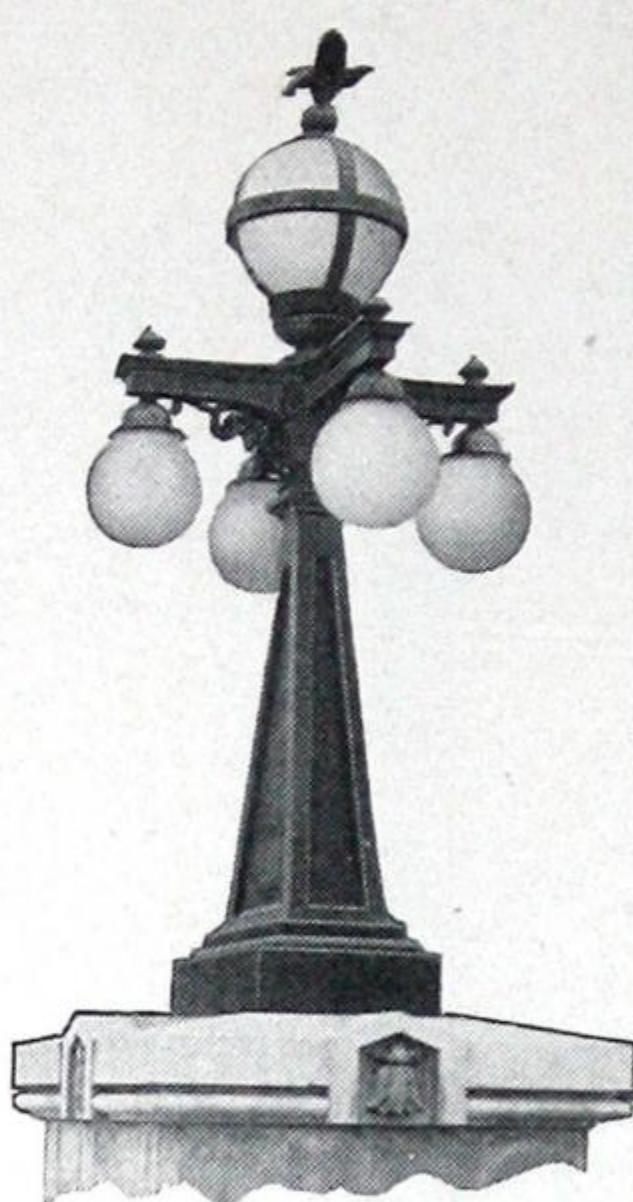
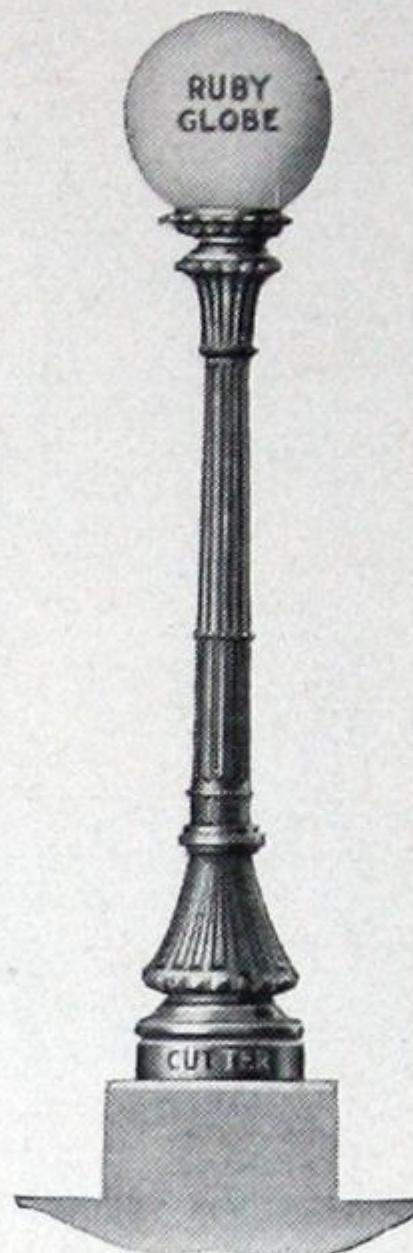
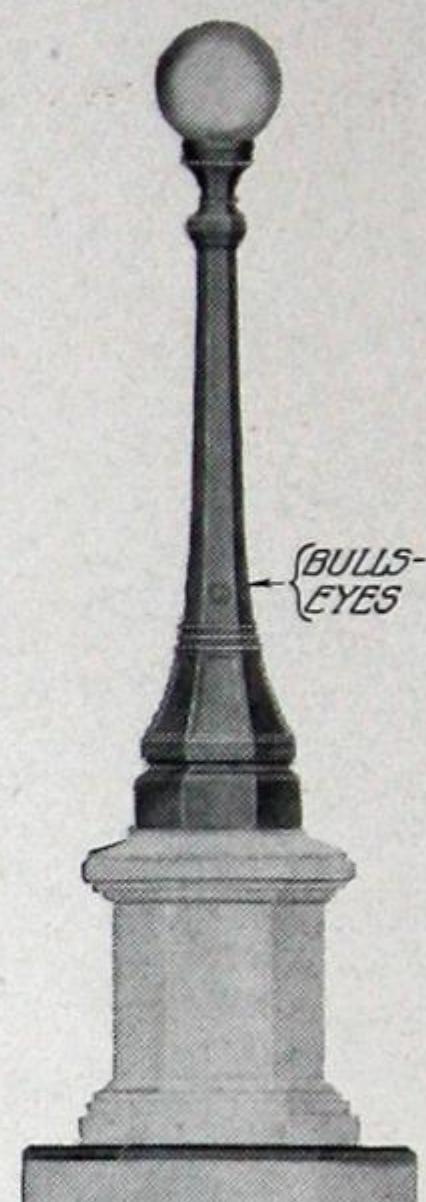
SOL-LUX 3-LIGHT  
BRIDGE NEWEL

COMMERCE  
NEWEL

SOL-LUX 5-LIGHT  
BRIDGE NEWEL

SOL-LUX 5-LIGHT  
GATE POST NEWEL

Dimensions are for reference only. For official dimensions apply to the nearest district office.

**CAST-IRON NEWELS AND TRAFFIC STANDARDS**ARCADIAN  
NEWELMETROPOLITAN  
NEWELCOMMERCE  
NEWEL“SAFETY FIRST”  
TRAFFIC NEWELEDGEWATER  
TRAFFIC NEWEL**Arcadian Newels**

Designed to be used as an ornamental newel or traffic post. Price includes eight-inch globe holder ring and socket but not glassware, wiring or foundation bolts.

Description	Style No.	Ship. Wt.	List Price
Style No.	Lb.	Ea.	
Arcadian 8, with medium multiple socket....	352481	210	\$63 90
Arcadian 8, with mogul multiple socket .....	352482	210	64 00
Arcadian 8, with Standard film socket.....	352483	210	65 00
Arcadian 6, with medium multiple socket....	340860	190	53 90
Arcadian 6, with mogul multiple socket .....	340861	190	54 00
Arcadian 6, with Standard film socket.....	352484	190	55 00
Arcadian 4, with medium multiple socket....	352485	160	43 90
Arcadian 4, with mogul multiple socket .....	352486	160	44 00
Arcadian 4, with Standard film socket.....	352487	160	45 00

**Metropolitan Newels**

A newel of simple but artistic design, adapted for lighting the entrances of buildings or for bridges and public places. Globe-holder has 8-inch fitter.

Price includes eight-inch globe holder ring and socket but not lighting unit, wiring or foundation bolts.

Metropolitan 6, with medium multiple socket	352488	225	67 90
Metropolitan 6, with mogul multiple socket..	352489	225	68 00
Metropolitan 6, with Standard film socket...	352490	225	69 00

**“Safety First” Traffic Newels**

For marking the centers of intersecting streets. These traffic posts are silent watchmen, always on the job. They may be equipped with flashers to produce an intermittent light if desired. Uses three  $\frac{3}{4}$ -inch foundation bolts.

Prices do not include globes, lamps, wiring or foundation bolts.

6-inch holder medium multiple socket.....	337935	175	46 90
8-inch holder medium multiple socket.....	337942	176	46 90
6-inch holder mogul multiple socket.....	341445	176	47 00
8-inch holder mogul multiple socket.....	337943	177	47 00
6-inch holder Standard film socket.....	337944	177	48 00
8-inch holder Standard film socket .....	337945	178	48 00

**Edgewater Newels**

This newel is an adaptation of the Edgewater design. It is furnished with or without red lenses and an auxiliary socket, mounted in the base. It can be furnished with 12-inch

octagonal base when desired. Price includes eight inch globe-holder ring and sockets but not globe, wiring or foundation bolts.

Description	Style No.	Ship. Wt.	List Price
Style No.	Lb.		
Edgewater 6, with medium multiple socket..	352491	225	\$69 90
Edgewater 6, with mogul multiple socket ....	352492	225	70 00
Edgewater 6, with Standard film socket.....	352493	225	71 00
Edgewater 6, with Bulls Eye lenses and medium multiple socket.....	352494	230	79 90
Edgewater 6, with Bulls Eye lenses and mogul multiple socket.....	352495	230	80 00
Edgewater 6, with Bulls Eye lenses and Standard film socket.....	352496	230	81 00

**Commerce Newels**

A massive newel designed especially for bridges and entrances to large buildings, etc. Prices include medium sockets, glassware and eagle ornamentation, but not foundation bolts. Uses four  $\frac{5}{8}$ -inch expansion bolts.

One-light.....	353249	475	220 00
Three-light.....	353250	550	240 00
Five-light.....	353251	625	270 00

**Sol-Lux Gate Post Newels**

Prices below include medium sockets for side lamps and mogul sockets for center lamps, unless otherwise specified. Prices do not include globes, lamps, wiring or foundation bolts.

No. of Lights	Style No.	Wt. Lb.	List Price
1	340759	125	\$37 50
2	341483	175	70 00
3	341439	175	70 00
4	341440	215	87 50
5	341441	215	87 50

**Sol-Lux Bridge Newels**

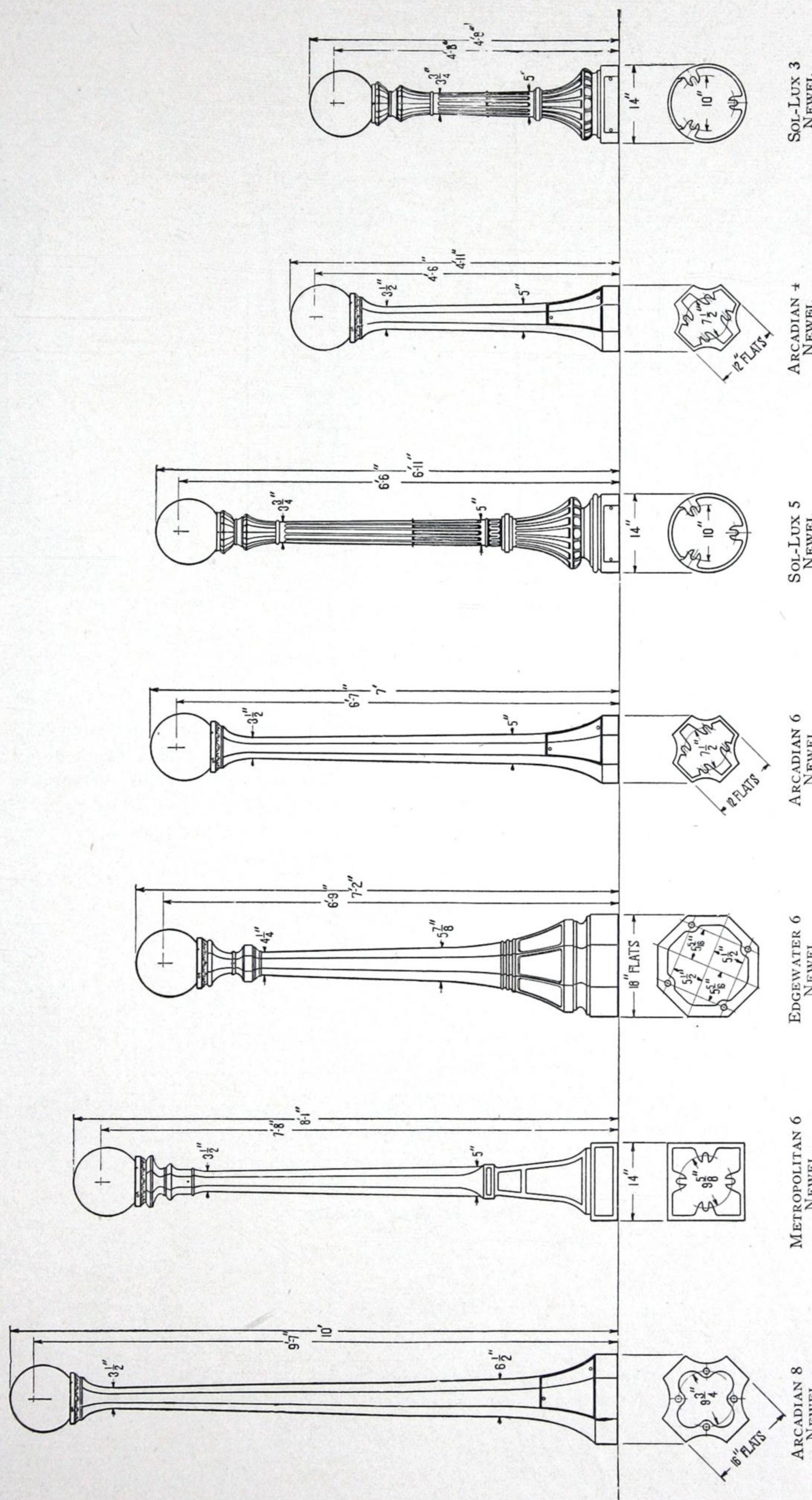
Prices below include medium sockets for side lamps and mogul sockets for center lamps, unless otherwise specified. Prices do not include globes, lamps, wiring or foundation bolts.

No. of Lights	Style No.	Wt. Lb.	List Price
1	341445	175	\$47 00
2	341446	225	77 00
3	341447	225	77 00
4	341448	265	92 00
5	341449	265	92 00

*Order by Style Number*

CAST-IRON NEWELS AND TRAFFIC STANDARDS—Continued

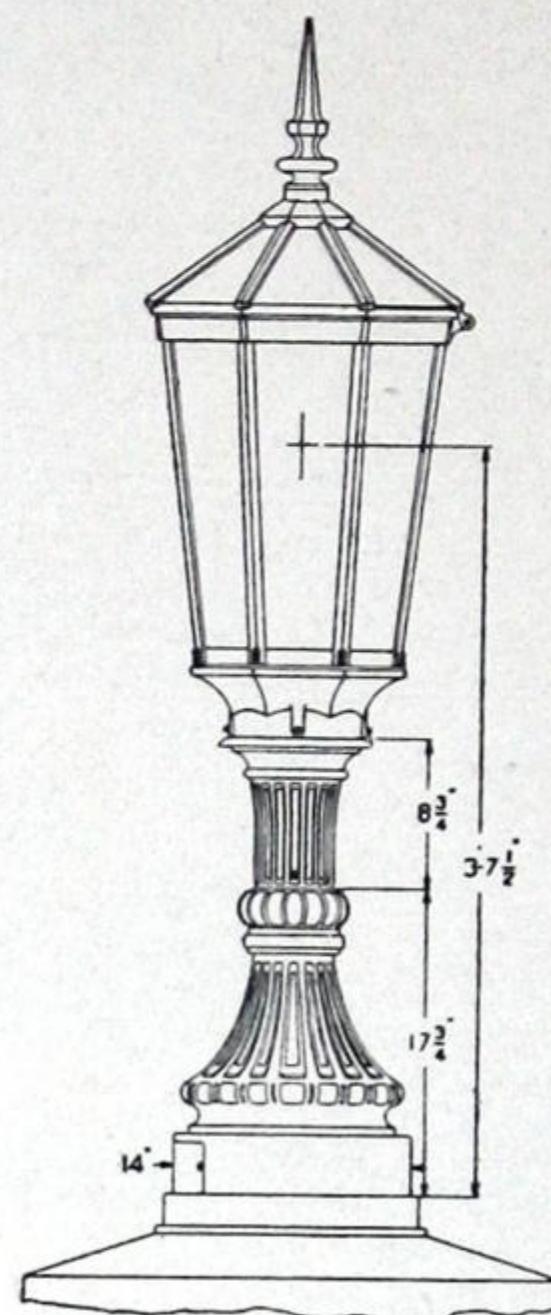
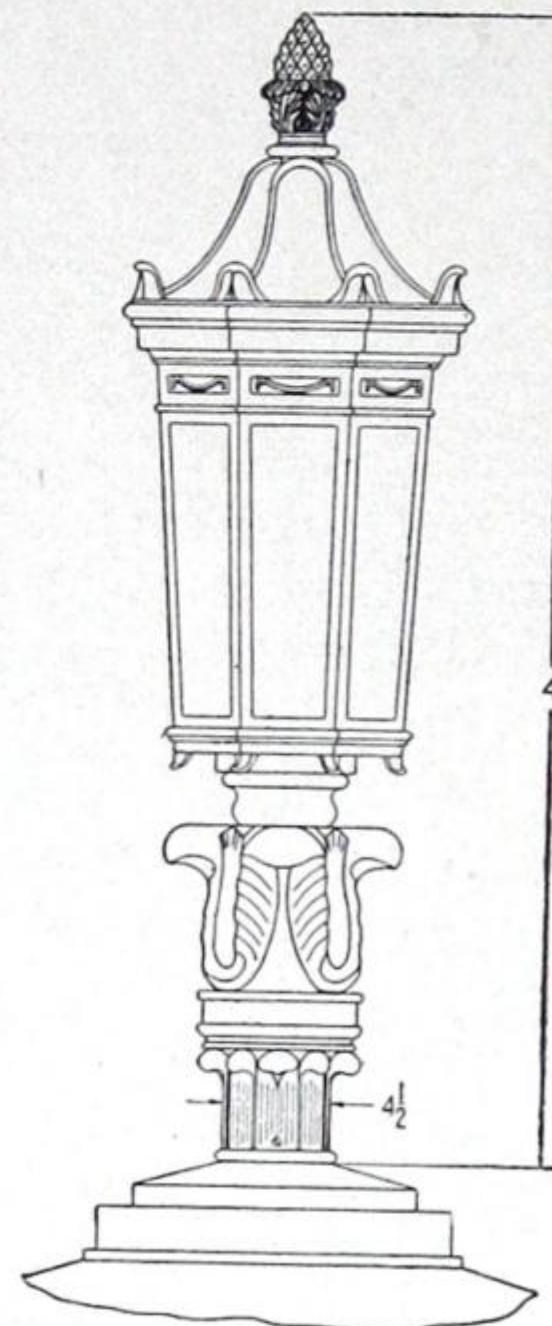
DIMENSIONS



Dimensions are for reference only. For official dimensions apply to the nearest district office.

**UNIVERSITY AND JEFFERSON NEWELS**

UNIVERSITY NEWEL



JEFFERSON NEWEL



These are short newels designed primarily for mounting upon brick or stone pillars at entrances to gateways, etc. The University Newel is designed to support an Octagonal type lantern of a

modified Gothic type which harmonizes with its column. The Jefferson Newel is designed to support either an Octagonal Senior or Junior top with or without ornamentation. It has a Type A fitter at the

top of its column. Furnished with either mogul or medium multiple socket as desired. When it is desirable to operate on a series circuit, series sockets can be furnished.

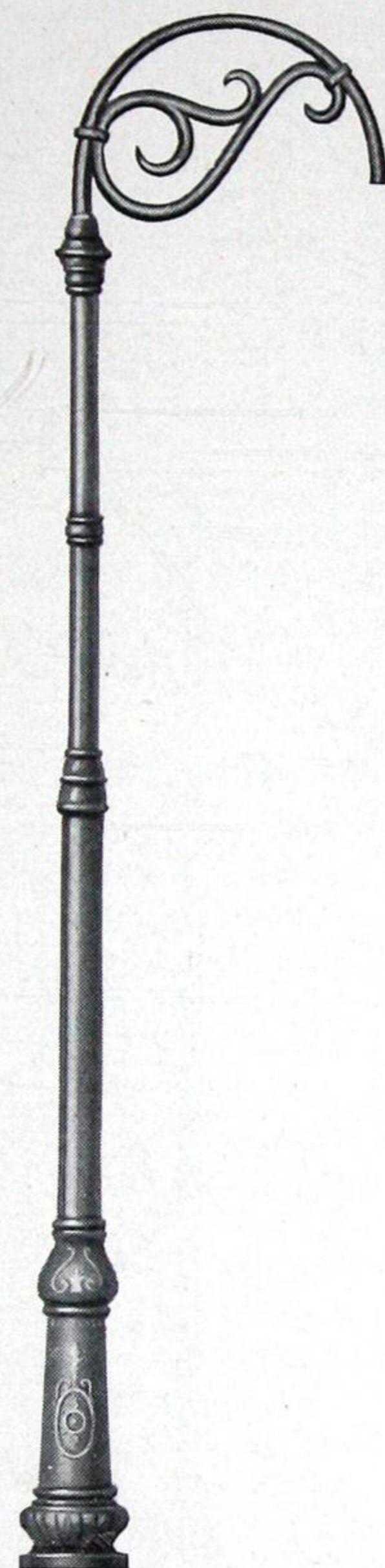
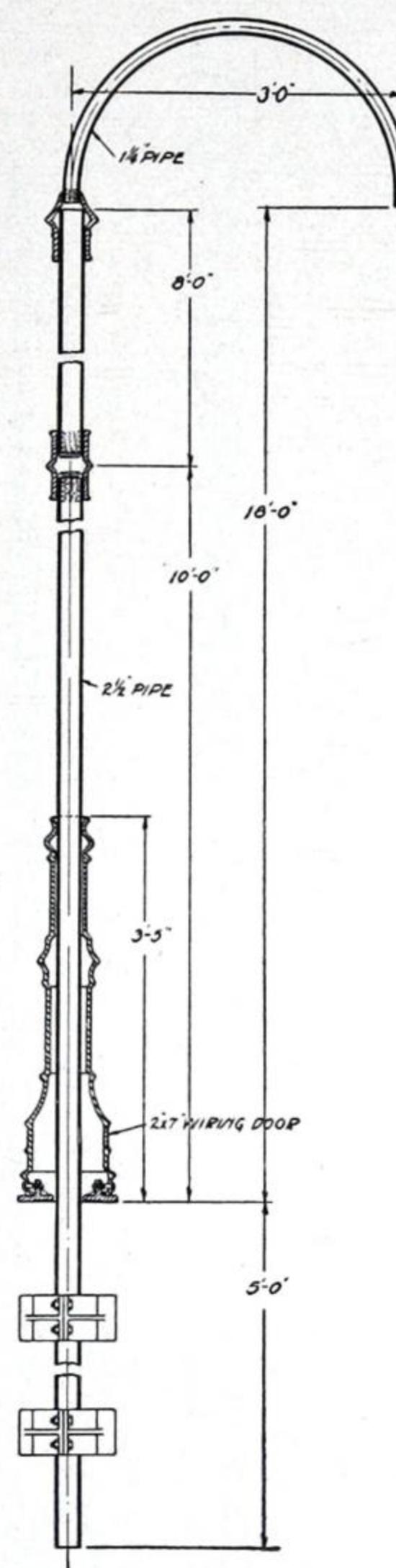
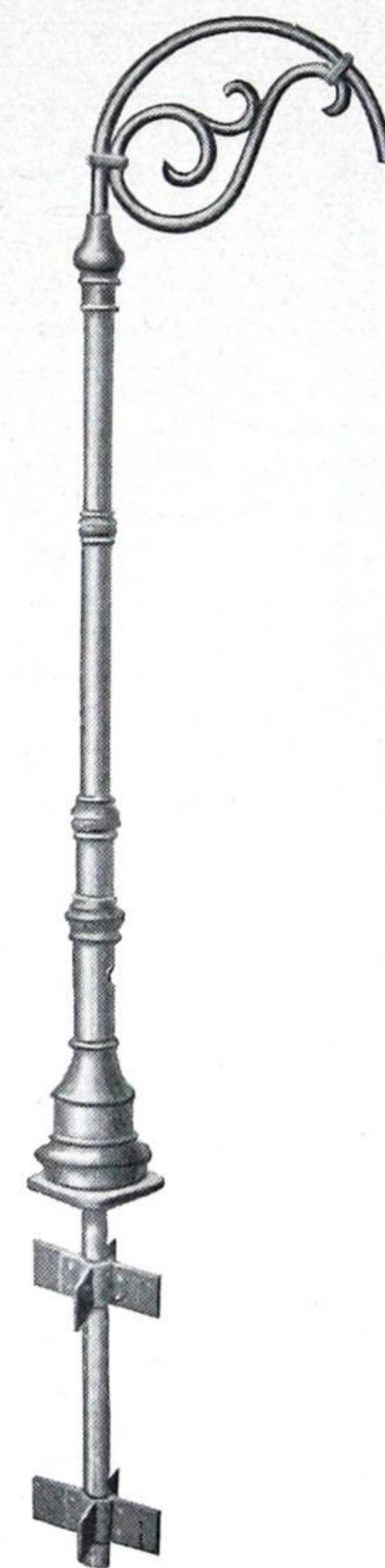
**LIST PRICES**

Description	Ship. Wt. Style No.	Lb. Ea.	List Price
University Newel complete with lantern, mogul multiple socket.....	351705	150	\$ 60 00
University Newel complete with lantern, Standard film socket.....	352403	150	61 00
Jefferson Newel complete with Octagonal Senior lantern, mogul multiple socket.....	351704	150	120 00
Jefferson Newel complete with Octagonal Senior lantern, Standard film socket.....	352404	150	121 00
Jefferson Newel complete with Octagonal Junior lantern, mogul multiple socket.....	352405	150	55 00
Jefferson Newel complete with Octagonal Junior lantern, Standard film socket.....	352406	150	56 00
Jefferson Newel complete with Paragon Senior all glass lighting unit, mogul multiple socket.....	352407	150	56 00
Jefferson Newel complete with Paragon Senior all glass lighting unit, Standard film socket.....	352408	150	57 00
Jefferson Newel without lighting unit.....	354167	130	20 00

*Order by Style Number*

## CAST-IRON ORNAMENTAL CROOKS

## STREET CROOKS AND PARK CROOKS

ONE-LIGHT  
STREET CROOKPARK CROOK  
DIMENSIONSONE-LIGHT  
PARK CROOK

## STREET CROOKS

These are well built street lighting poles for supporting incandescent lamp fixtures. Height from ground to insulator, 18 feet. Other heights built to order. Diameter of base, 14 inches.

Insulators or 8-inch globe holders with medium screw sockets will be furnished on request. Uses four  $\frac{3}{4}$ x15-inch foundation bolts.

Description	No. of Lights	Style No.	Ship. Wt., Lb.	List Price
With 1 1/4-inch pipe bend only.....	1	340866	455	\$105 00
With 1 1/4-inch pipe bend only.....	2	340867	475	110 00

## PARK CROOKS

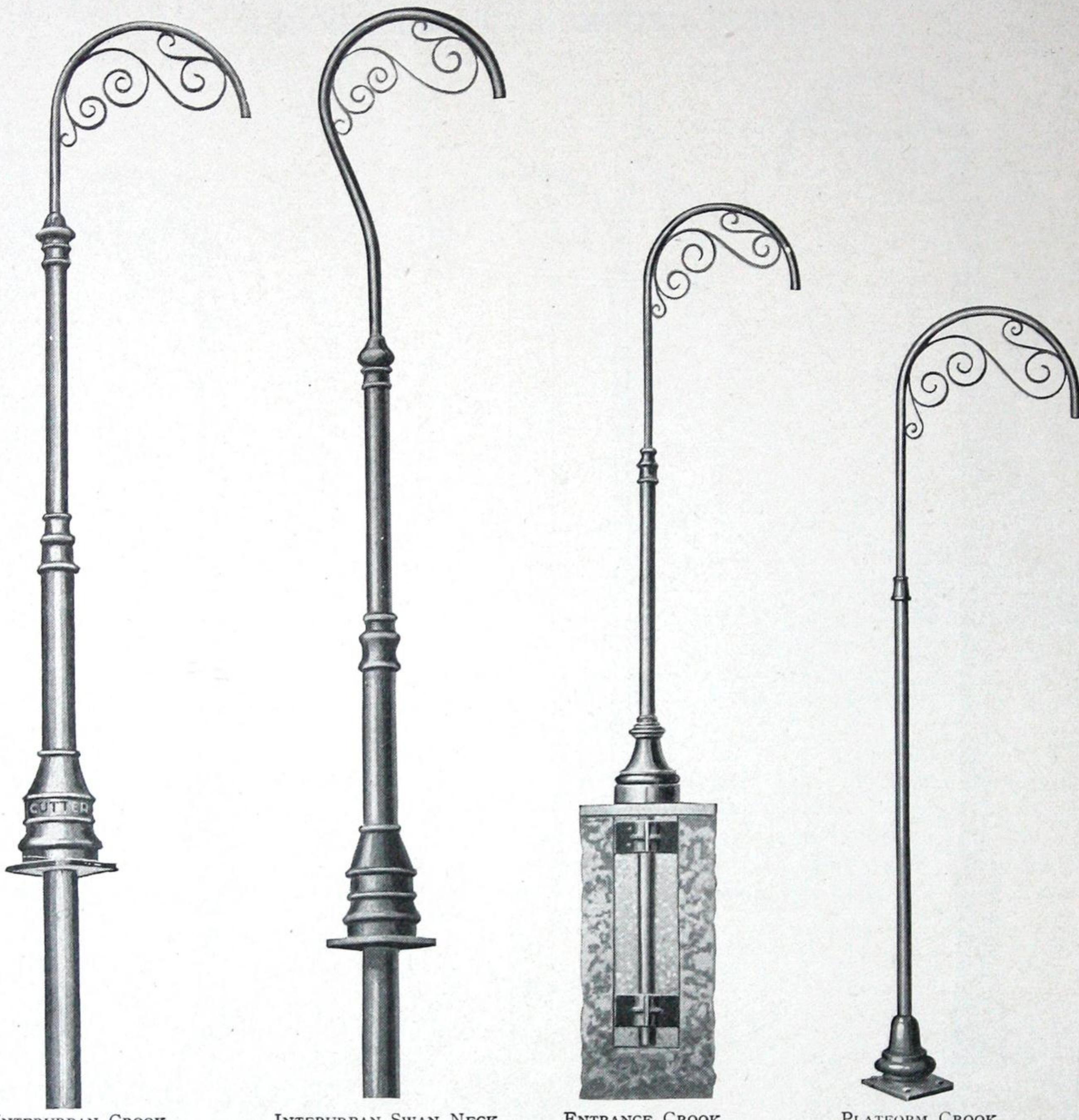
Park crooks are light but substantial poles for supporting incandescent lamp fixtures. Standard height from ground to insulator, 18 feet. Other heights built to order. On 14-foot and shorter heights, 4-foot ground sections will be supplied; on greater heights, 5-foot. If ground section is not wanted, deduct \$7.50 from list and use four  $\frac{3}{4}$ -inch x 15-inch foundation bolts.

Description	No. of Lights	Style No.	Ship. Wt., Lb.	List Price
With 1 1/4-inch pipe bend only.....	1	340879	335	\$70 00
With 1 1/4-inch pipe bend only.....	2	340895	355	75 00

Order by Style Number

## CAST-IRON ORNAMENTAL CROOKS—Continued

## INTERURBAN, ENTRANCE AND PLATFORM CROOKS

**Interurban Crooks and Swan Necks**

The column is made of 4-inch and 2½-inch pipe, with the 4-inch pipe extending 4 feet into the ground. The cast iron base has a door to make wiring easy. The crook is made of 1¼-inch pipe and holds the lamp 2 feet 3 inches from the column. The height to insulator is 14 feet. High voltage insulator, or 8-inch globe holder with medium screw socket will be furnished when so ordered. If scroll is not wanted, deduct \$2.00 from list. For ground anchors, add \$5.50 to list. If base is not desired, deduct \$5.00 from list price.

Description	Style No.	Wt. Lb. Each	List Price
Crook with 1¼-inch pipe bend only.....	340988	220	\$55 00
Swan Neck with 1¼-inch pipe bend only.....	340989	20	45 00

Prices do not include lamps or wiring.

**Entrance Crooks**

Artistic fixtures for lighting entrances to parks, private grounds, etc. The 2½-inch pipe extends 4 feet into the ground.

Description	Style No.	Wt. Lb. Each	List Price
With 1¼-inch pipe bend only	340992	160	\$45 00

**Platform Crooks**

A 1¼-inch pipe with cast-iron base and crook bend of ½-inch pipe holds the lamp 8 feet from the floor. Prices do not include reflectors.

Description	Style No.	Wt. Lb. Each	List Price
With ½-inch pipe bend only	340994	80	\$18 00

*Order by Style Number*

## HOLLOWSPUN CONCRETE LIGHTING STANDARDS

### Application

The use of concrete as a component of pole construction has been growing in favor during recent years. Concrete, because of its close resemblance to stone, is particularly suitable for outdoor lighting, especially in residential districts, parks and along boulevards.

The chief requirements of concrete posts for street lighting service are strength, durability and beauty. All of these requirements are amply met by Hollowspun posts. The problem of obtaining ample tensile strength without sacrificing architectural beauty has been met by the application of the centrifugal method of manufacture.

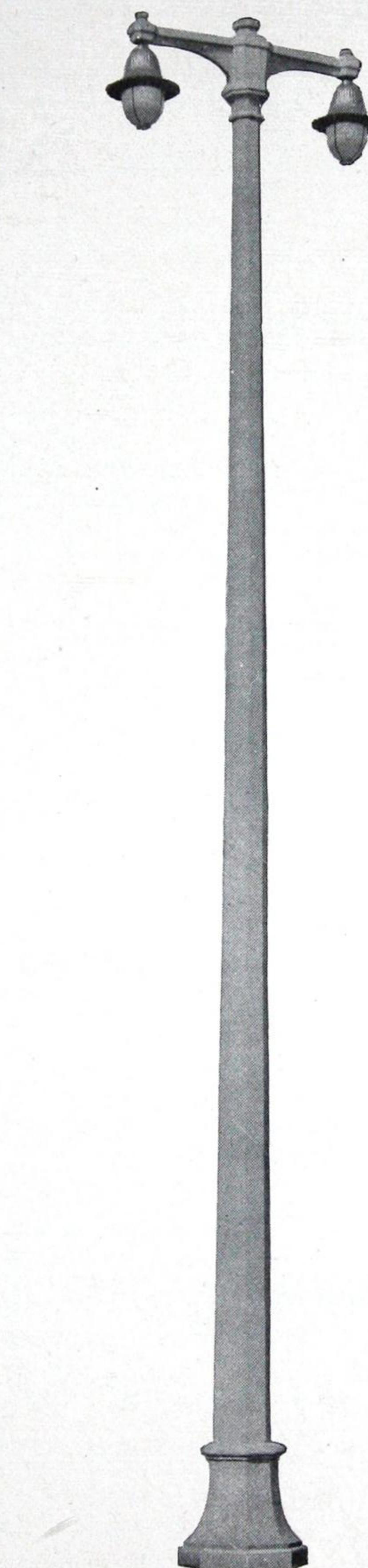
### Description

Westinghouse Hollowspun street lighting standards or posts are of reinforced concrete. They are manufactured by a simple and unique process perfected after years of intensive research. After careful preparation the concrete is placed in steel molds in which the reinforcing elements or "cages" are assembled. These molds are then rotated at a high speed. This produces a dense, compact mass resembling stone in appearance and which for durability, toughness and strength is unexcelled.

The reinforcing structure consists of vertical steel bars and spiral wrappings. The diameters of these elements have been carefully calculated for each type of post, and their position in the molds is accurately maintained throughout the process of manufacture. In computing the strength of reinforcing elements, such factors as stresses due to handling during erection and other stresses, including that which might be caused by the impact of vehicles, are considered.

Manufacture by the centrifugal process compresses the aggregate closely around the mold and the reinforcing structure, thus assuring a product of very high tensile strength. The centrifugal action also forms a cylindrical opening which extends the entire length of the post; hence the name Hollowspun. Uniformity of contour is assured by the steel molds in which the posts are formed.

The foundation for Hollowspun posts is generally a monolithic part of the post itself which, with proper embedment,



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imparts the stability essential to street lighting standards.

Suitable casings for use with the va-

rious types of Westinghouse ornamental lighting units are illustrated on page 880.

### Construction

The improvement in concrete post construction effected by the perfection of the Hollowspun process can only be fully appreciated when it is compared with the product of other processes.

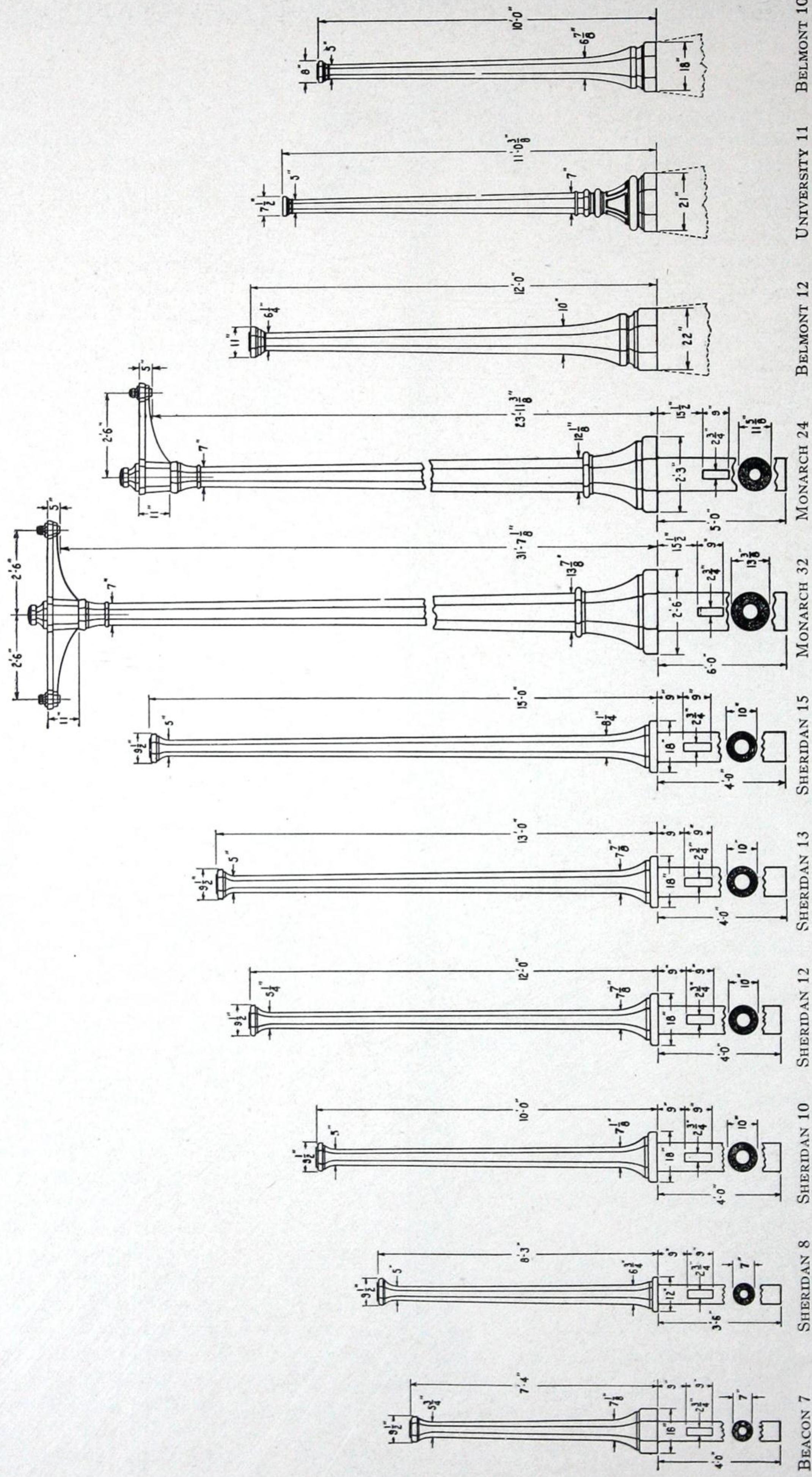
Reinforced concrete post construction requires a relatively high percentage of tensile reinforcement. This carries with it the need of care in keeping down bond stresses, necessitating a careful distribution of the steel. On account of the comparatively small cross-section, adequate shear reinforcement is needed as well. This reinforcement, commonly called a cage, is so dense that to try to force concrete into place by tamping through an open side of the form is out of the question. To try to do it from the end by either the spading or the vibration method is likewise difficult and impractical. In either method the results are always uncertain.

In the Hollowspun process, the reinforcing steel, after being accurately computed for the particular class of pole to be made, is held rigidly in the place it was designed to occupy, so that the actual tests of strength check the design very closely. The complete reinforcing cage is then placed in a horizontal form and held at the desired distance from the surface of the form by concrete buttons which later become part of the finished wall of the pole. Concrete is then added and the entire form rotated at high speed, thus developing centrifugal force sufficient to compact the concrete into a very dense wall, leaving a hollow opening in the center which extends the entire length of the pole.

Hollowspun street lighting standards are made in nine different heights or types and five different forms or styles.

The permanence of reinforced concrete poles is beyond question. So far as is known, they are not subject to the ordinary action of the elements. Water tends to harden concrete and does not affect the reinforcing steel since it is entirely embedded and therefore inaccessible to it and the air. The poles made by the centrifugal process have a decided advantage in freedom from electrolytic corrosion, since the concrete is much more dense than is possible in concrete

#### **HOLLOWSPUN CONCRETE LIGHTING STANDARDS—Continued**



Dimensions are for reference only. For official dimensions apply to the nearest district office.

## HOLLOWSPUN CONCRETE LIGHTING STANDARDS—Continued



poles made by hand methods. While the reinforcing used can be grounded in poles which are expected to carry heavy currents, this is not ordinarily considered necessary.

**Distinctive Features**

**Economy**—In Hollowspun posts the foundation is an integral part of the post,

hence the building of foundations is unnecessary. All that is necessary is to dig a hole and set the post therein. This allows the setting of posts in any kind of weather and facilitates their erection.

From a maintenance standpoint Hollowspun posts are extremely economical. There being no metallic parts exposed to the weather there is nothing

to rust, hence painting and other maintenance charges are eliminated.

The comparative lightness of Hollowspun posts is attained without sacrificing strength, and reduces freight charges to a minimum.

**Appearance**—The centrifugal method of post manufacture produces a post of slender appearance which has the same

**HOLLOWSPUN CONCRETE LIGHTING STANDARDS—Continued**

or even greater tensile strength than a larger post made by any other method. Hence in Hollowspun posts beauty without bulk is an outstanding characteristic.

The aggregate used in making Hollowspun posts imparts an attractive appearance and thus eliminates the need of elaborate designs or scroll work. The

black and white aggregate closely resembles cut granite in appearance. When desired an aggregate of red Wisconsin granite may be used.

**LIST PRICES**

Hollowspun Standards are regularly furnished in a black and white granite aggregate. Other aggregates can be supplied at an additional charge.

**List prices and style numbers** of standards do not include casings or lighting units.

Description	Style No.	Ship. Wt. Lb.	List Price
Sheridan 15 Standard*	346821	850	\$78 00
Sheridan 13 Standard	346823	750	70 00
Sheridan 12 Standard	346819	725	67 00
Sheridan 10 Standard	346820	675	60 00
Sheridan 8 Standard	346824	600	56 00
St. Louis 13 Standard	346920	750	70 00
Belmont 10 Standard	346826	650	60 00
Belmont 12 Standard	346836	1000	80 00
Beacon 7 Standard	346795	625	53 00
Monarch 32 Standard	346749	4300	180 00
Monarch 24 Standard	346785	3000	150 00
University 11 Standard	346829	750	64 00

**CASINGS FOR HOLLOWSPUN STANDARDS**

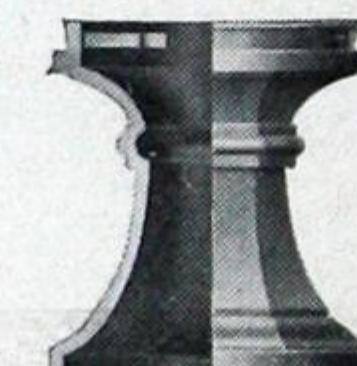
ST. LOUIS CASING



BELMONT CASING



SHERIDAN CASING



AMHERST CASING

Lighting units are mounted on concrete standards by means of casings or adapters rigidly attached to the standard. Three threaded inserts are cast on top of the column and the adapter is held by screws threaded into the inserts. Adapter and casings are rust-proof to prevent discoloration of the standard.

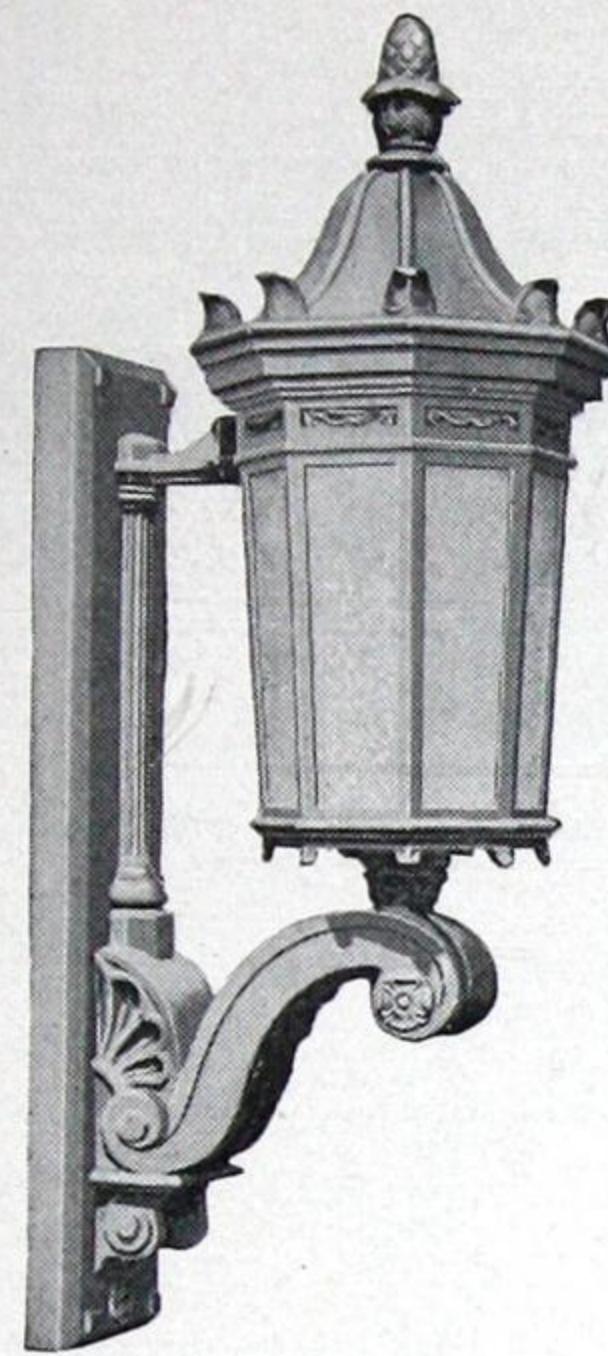
**LIST PRICES**

Description	Style No.	Ship. Wt., Lb.	List Price
St. Louis casing	352446	12	\$30 00
Belmont casing	351760	5	10 00
Sheridan casing	352445	8	14 00
Amherst casing	352497	8	14 00

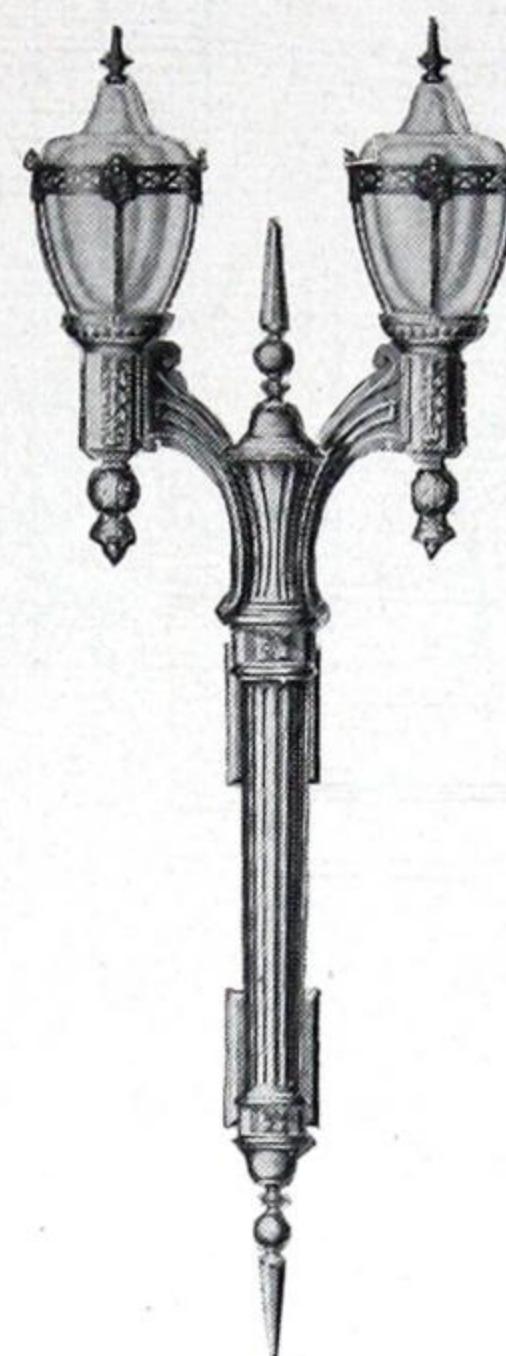
\*The numeral following the name of standard indicates the approximate height in feet of the column only.

*Order by Style Number*

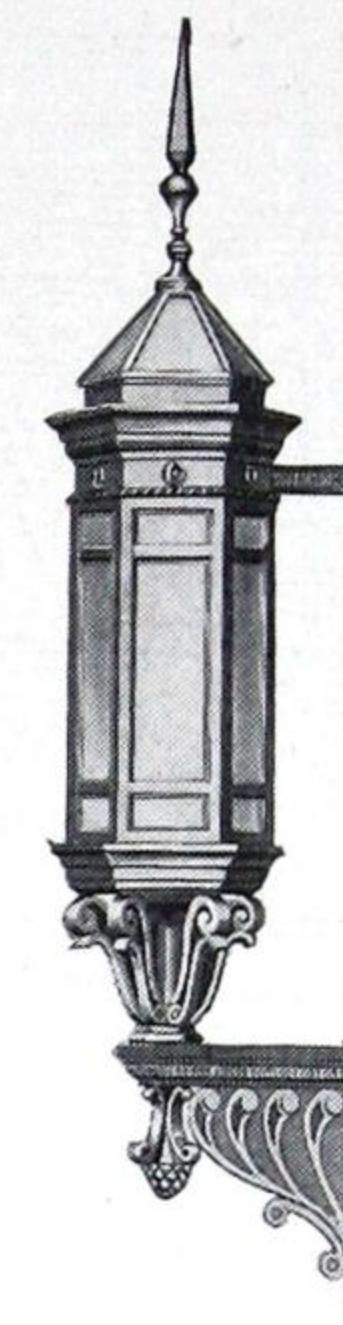
## ORNAMENTAL WALL BRACKETS



UNIVERSITY



BELVEDERE



FLORENTINE

These brackets are designed to support any type of senior or junior lighting unit and when conditions warrant may be equipped with Bi-lux refractors. In locations where the liability of breakage

is great, the Octagonal type of lighting unit is recommended, inasmuch as the glass panels can be purchased locally and the replacing costs but a few cents apiece. Units can be furnished with

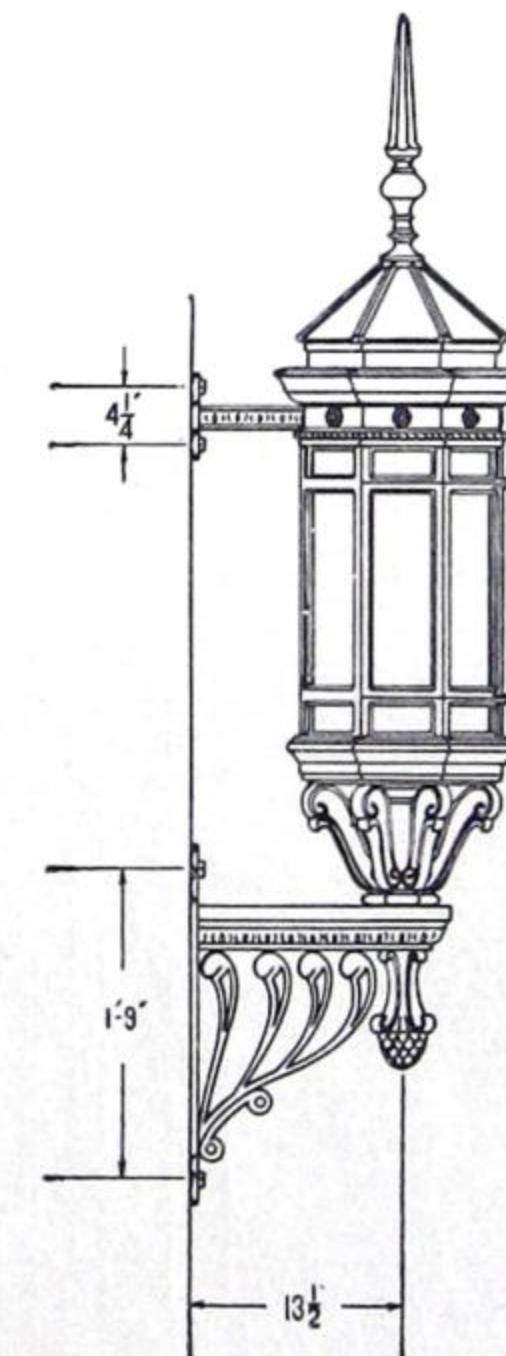
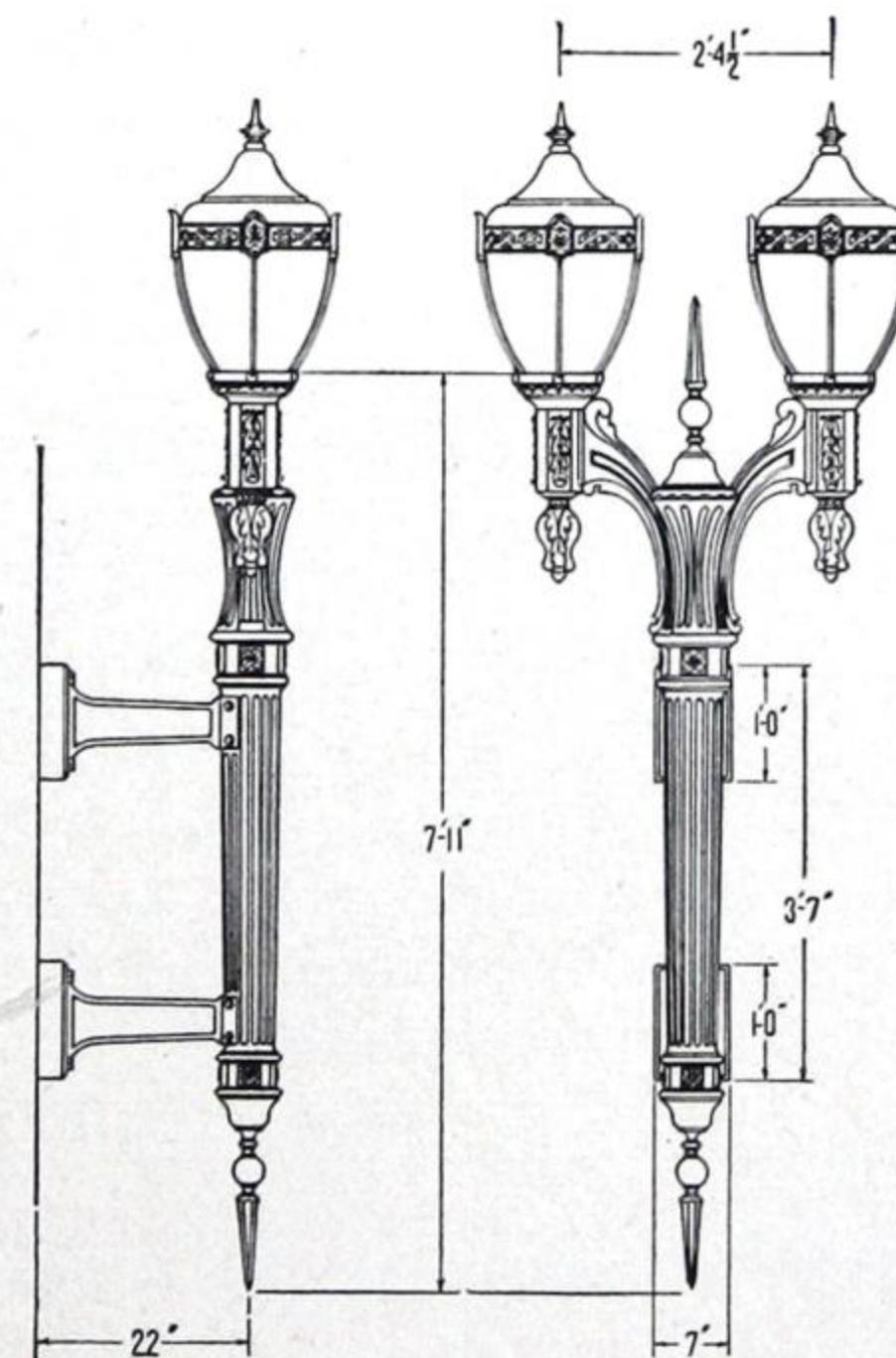
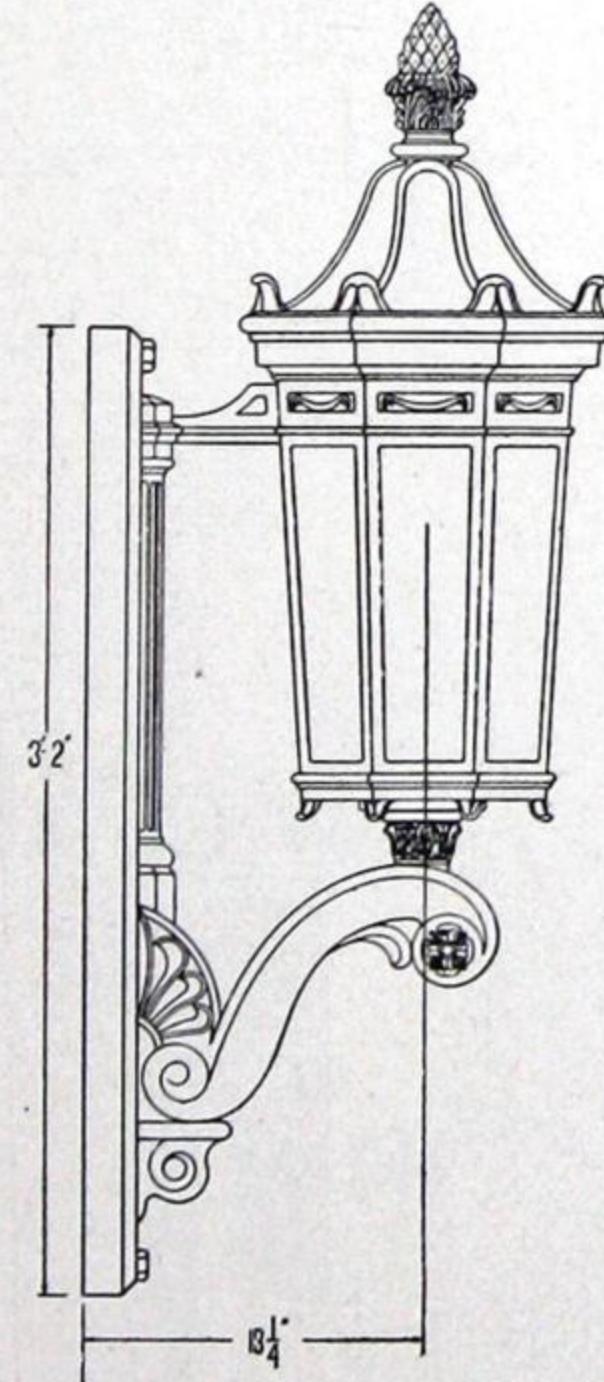
either mogul or medium multiple sockets or series sockets when required.

The Belvedere bracket may be equipped with any type of lighting unit. See pages 891-896 for prices.

## LIST PRICES

Description	Style No.	Ship. Wt. Lb., Each	List Price
Belvedere bracket complete with lighting units, mogul multiple sockets .....	351703	450	\$228 00
Belvedere bracket without lighting units .....	352480	160	142 00
Florentine bracket complete with lantern, mogul multiple socket.....	351741	275	300 00
University bracket complete with lantern, mogul multiple socket.....	351701	200	110 00

## DIMENSIONS IN FEET AND INCHES



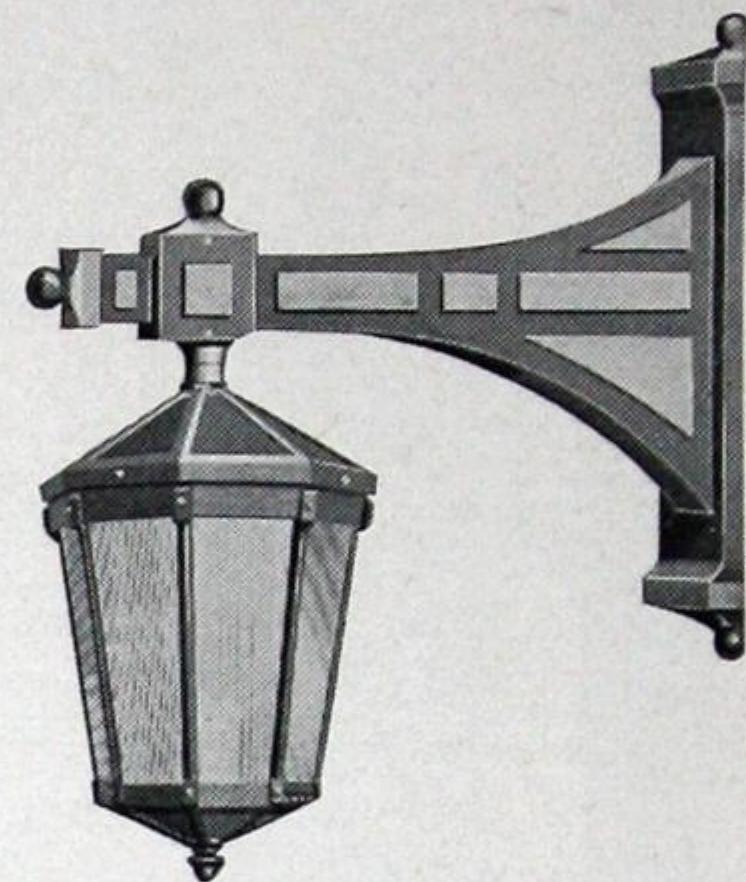
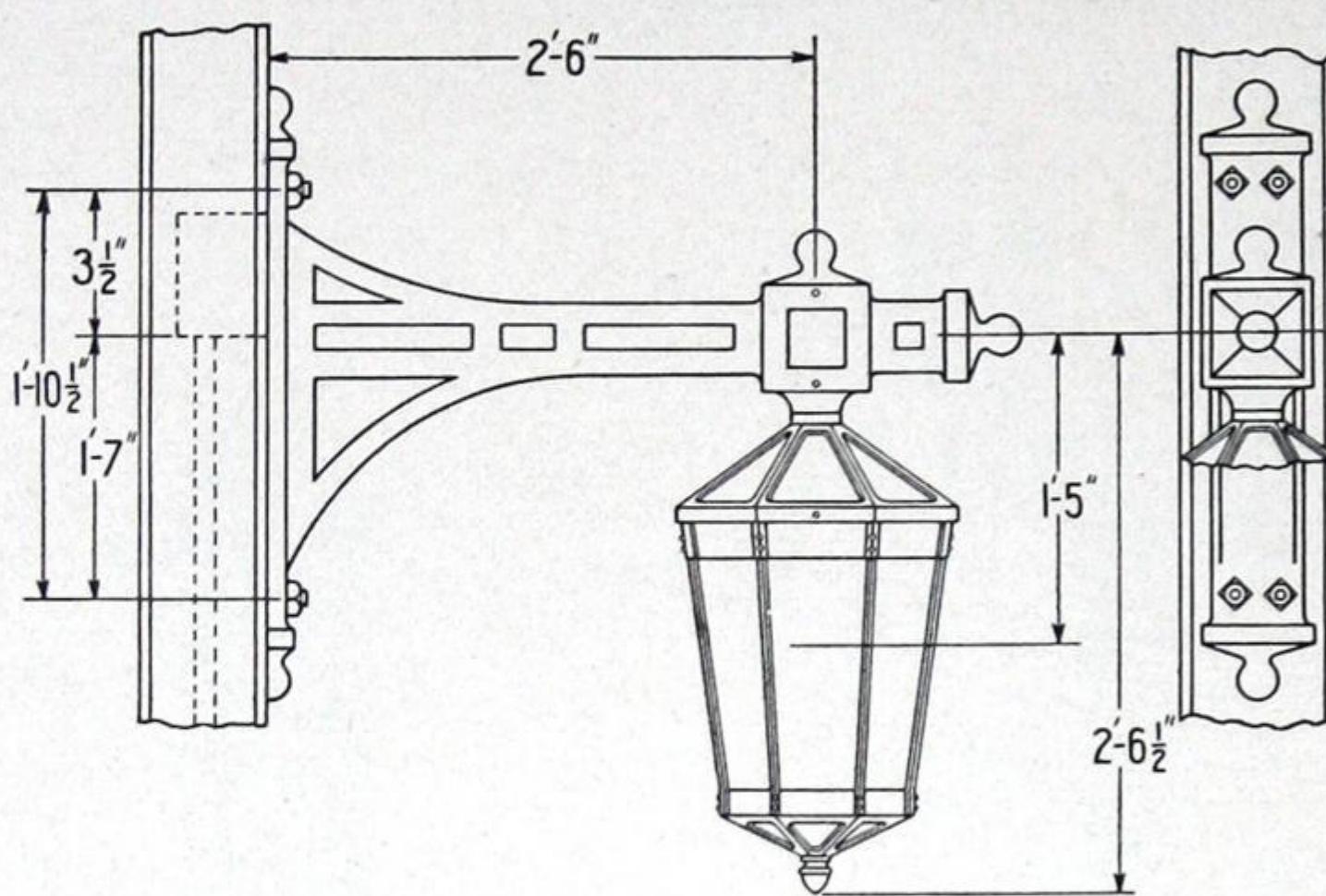
Dimensions are for reference only. For official dimensions apply to the nearest district office.

Order by Style Number

7-463A

## ORNAMENTAL WALL BRACKETS—Continued

## Colonial Brackets



COLONIAL BRACKET WITH OCTAGONAL JUNIOR PENDANT

The exterior of churches, public buildings, railroad depots, etc., may be effectively lighted with units mounted on ornamental brackets.

The Colonial bracket as illustrated is supporting an Octagonal Junior pendant lighting unit. Price includes bracket only. See pages 891–896 for prices on lighting units.

Style No.  
351402

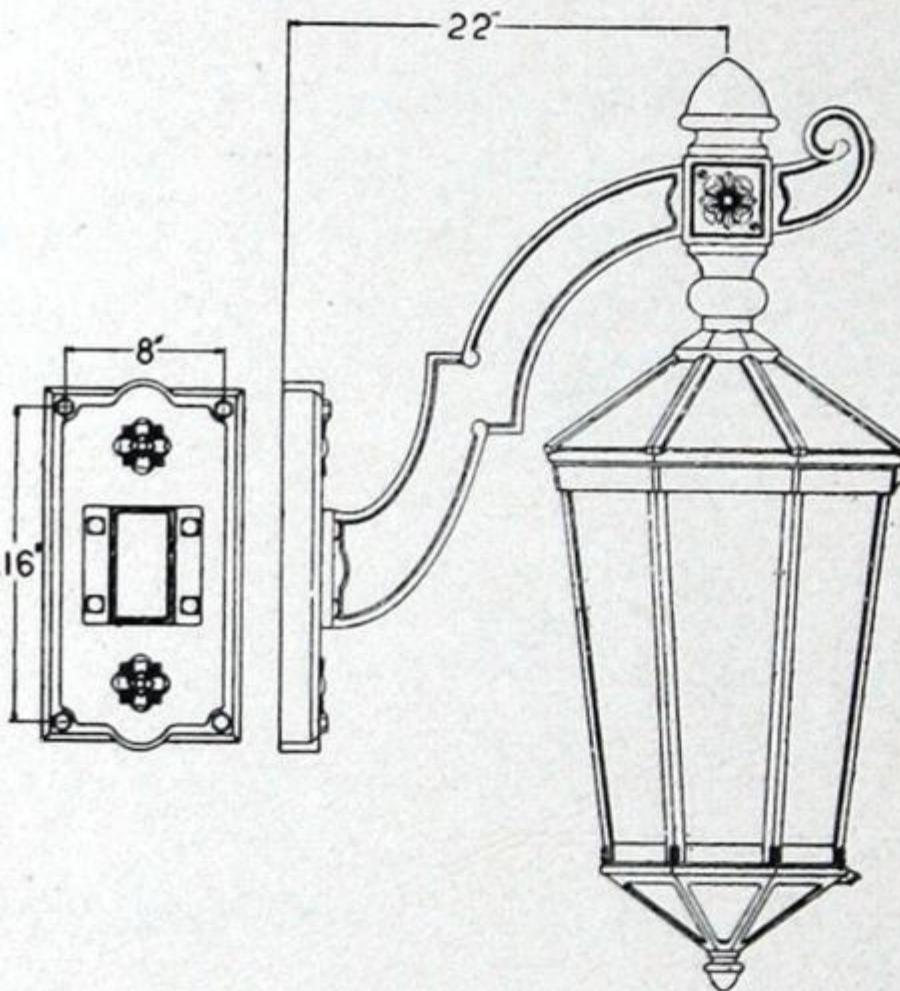
Ship. Wt., Lb.  
94

List Price  
\$30 00

## Santiago Brackets



SANTIAGO BRACKET WITH OCTAGONAL JUNIOR PENDANT



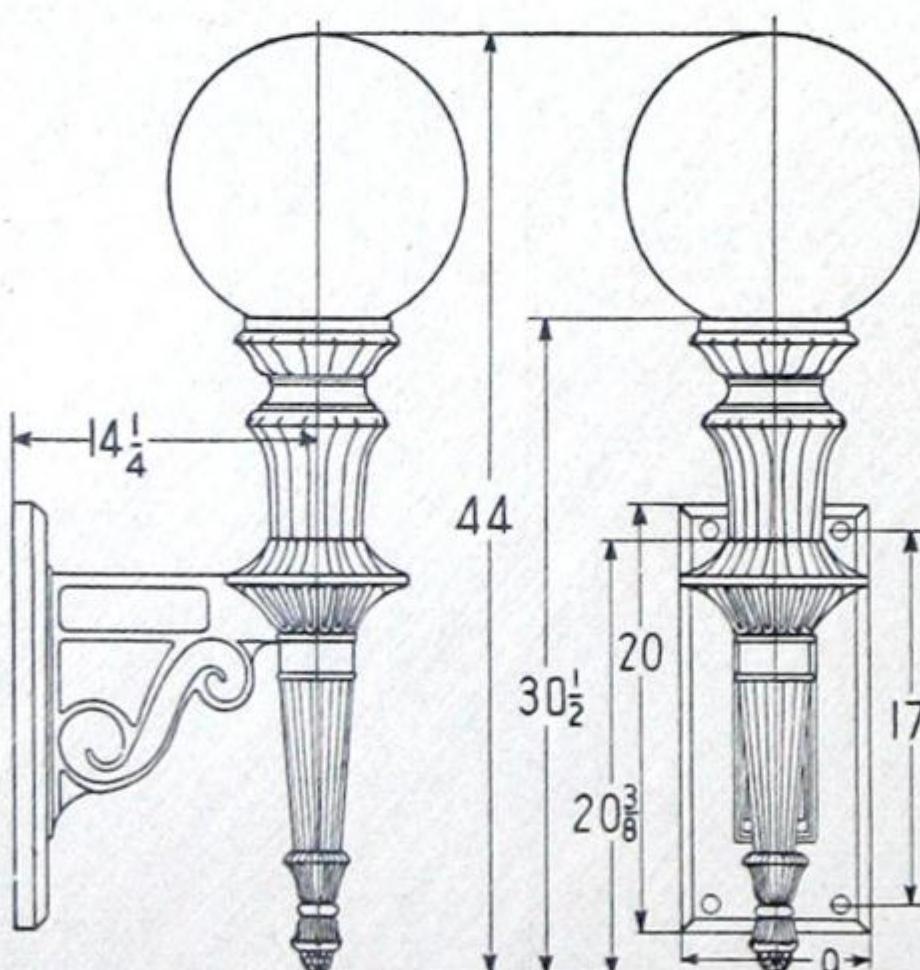
SANTIAGO BRACKET WITH OCTAGONAL SENIOR PENDANT

The Santiago brackets as illustrated are supporting Octagonal pendant lighting units. Price includes bracket only. See pages 891–896 for prices on lighting units.

Style No.  
351401

Ship. Wt., Lb.  
98

List Price  
\$29 00



SINGLE-LIGHT COMMERCE BRACKET

Dimensions are for reference only. For official dimensions apply to the nearest district office.

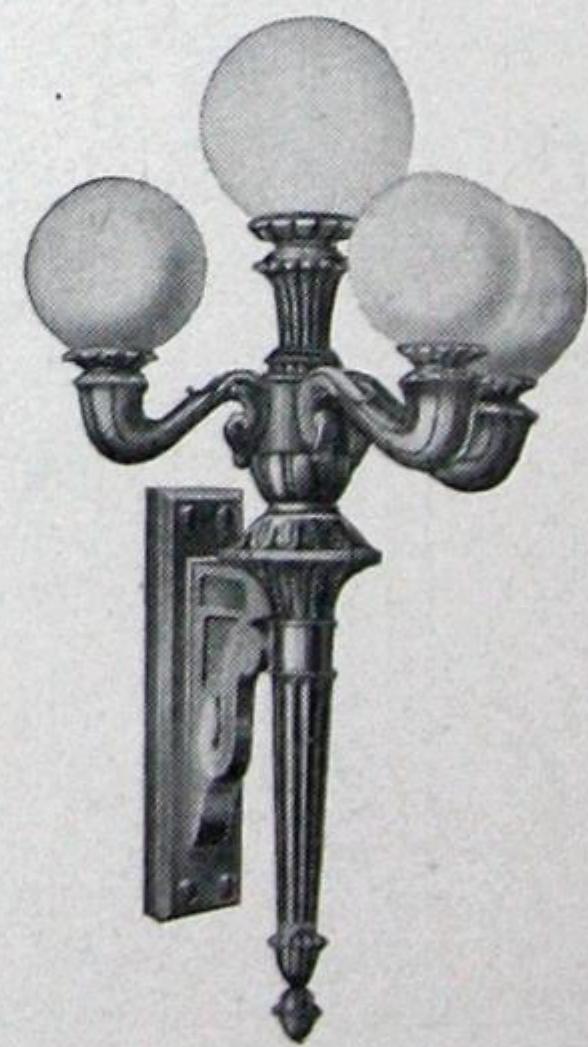
*Order by Style Number*

## Commerce Brackets

A massive fixture of distinctly artistic and classical design, arranged for ball globes in one-light, three-light and four-light units. They are particularly adapted for lighting entrances to fine structures.

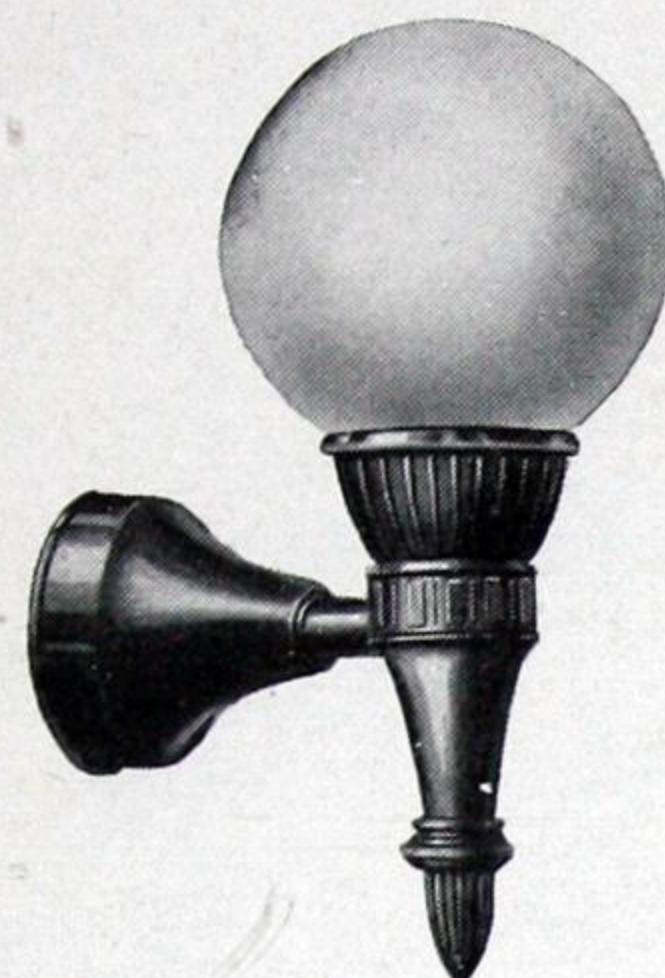
Prices include bracket with medium socket for side globes and mogul socket for top globe, but do not include globes; 6x10 globes are recommended for side, and 6x12 for top. See pages for prices on globes.

Description	Style No.	Ship. Wt., Lb.	List Price
One light	341453	90	\$51 50
Three light	341454	145	60 00
Four light	341455	155	65 00

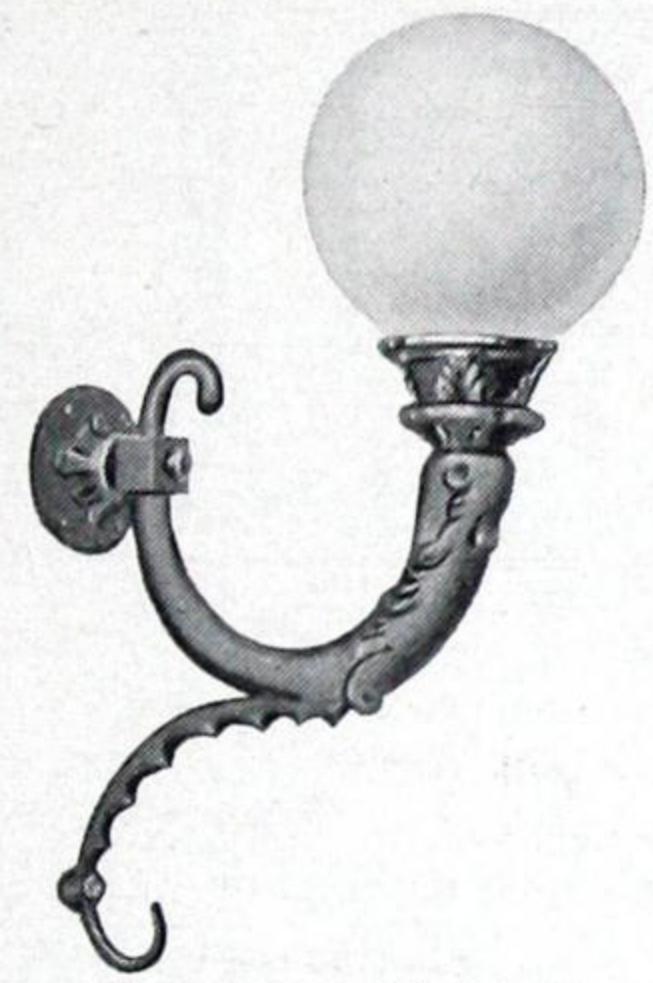


4-LIGHT COMMERCE BRACKET

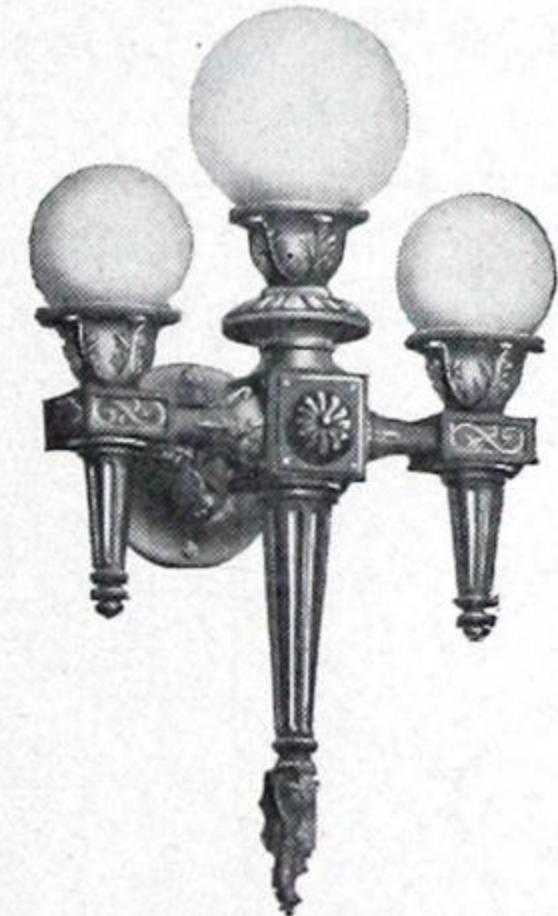
ORNAMENTAL WALL BRACKETS—Continued



MIDGET BRACKET



REVERSIBLE BRACKET



3-LIGHT CORRIDOR BRACKET

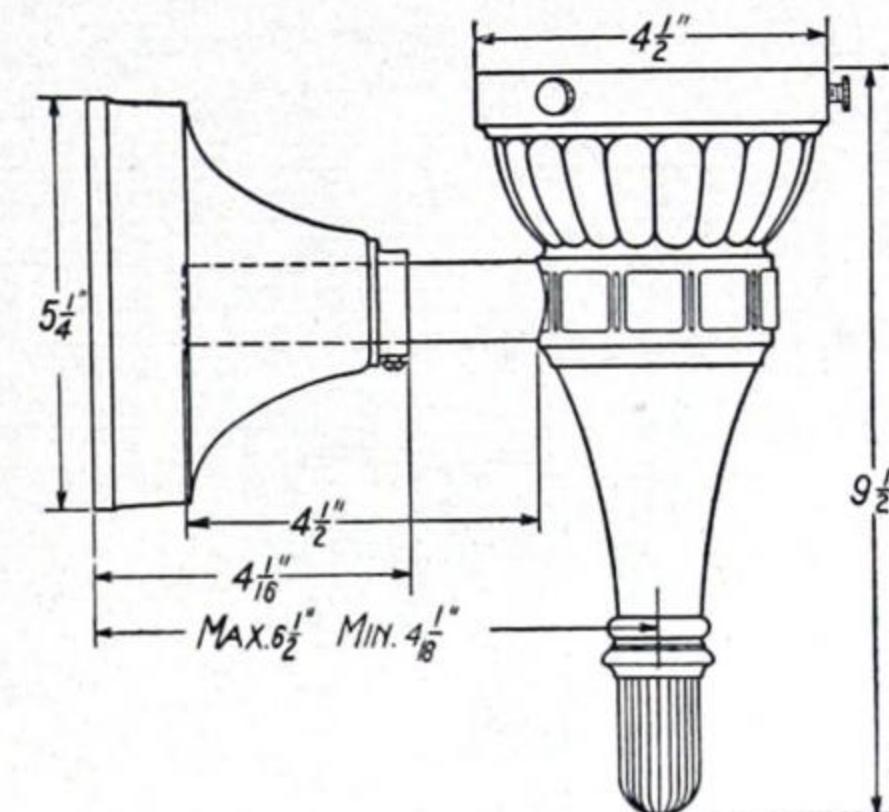


DELPHI REVERSIBLE BRACKET

**Midget Brackets**

A light cast-iron bracket designed for small sizes of lamps. Has a threaded stem for attachment to crowfoot or conduit. Equipped with  $4\frac{1}{4}$ -inch holder and medium socket, but not wired and without globe.

Style No.      Ship. Wt., Lb.      List Price Each  
341451              7              \$5 25



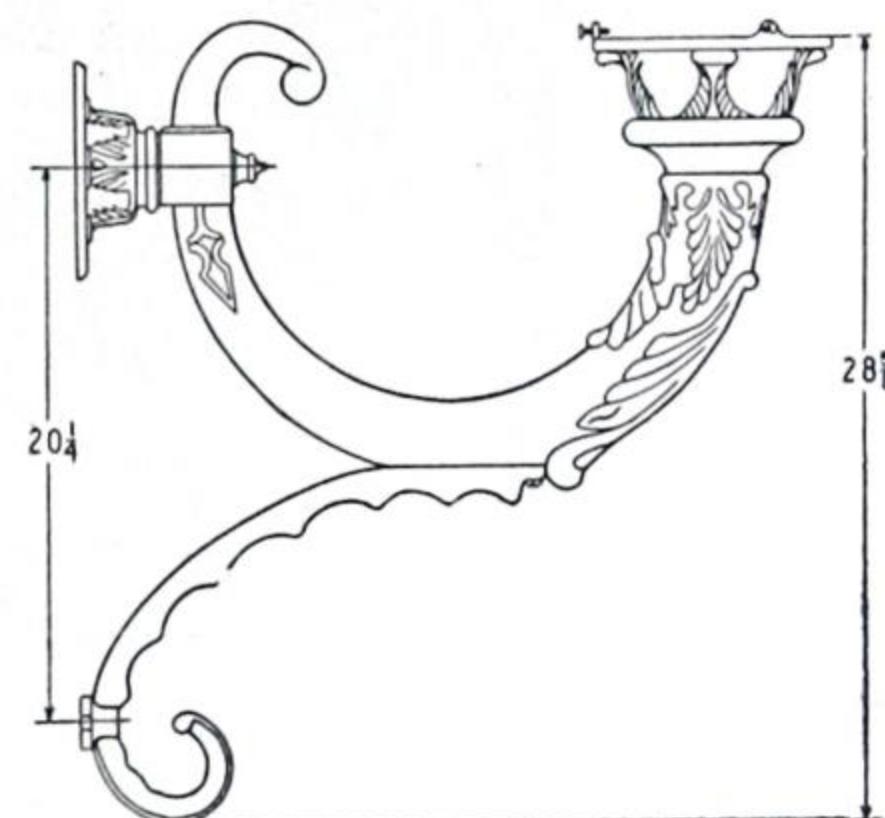
MIDGET BRACKET

**Reversible Brackets**

When desired this bracket may be reversed. In this position it has the same artistic lines and correct proportions as in the position illustrated. Fitted with 8-inch globe holder.

Prices do not include globe or wiring.

Description	Style No.	Ship. Wt. Lb.	List Price Each
With medium multiple socket.....	340966	65	\$25 90
With mogul multiple socket.....	341452	65	26 00



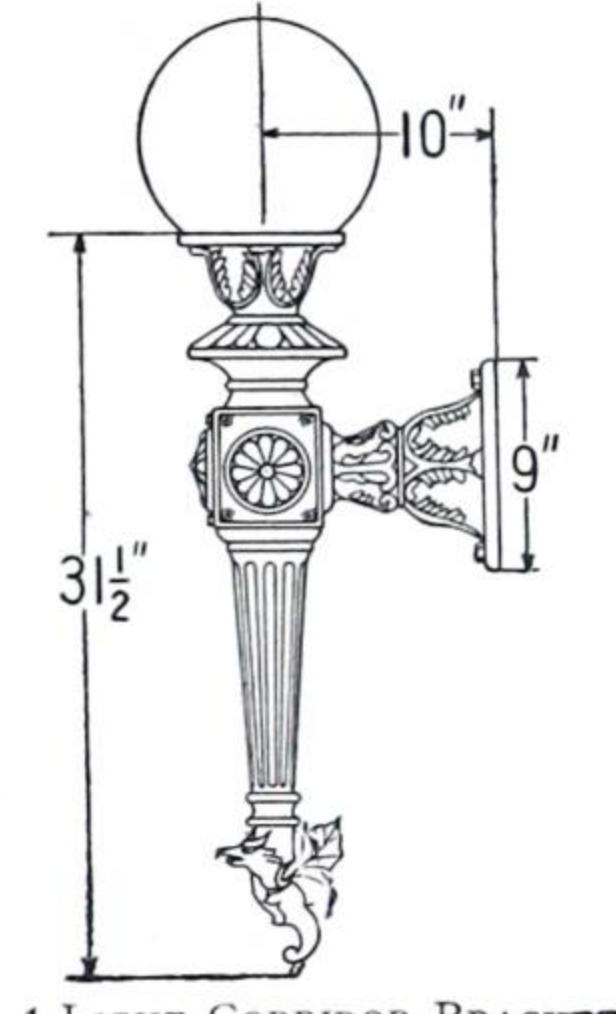
REVERSIBLE BRACKET

**Corridor Brackets**

These cast-iron brackets are of artistic design and adaptable to corridors or arcades in office buildings, schools, public buildings, etc.

Prices include globe-holders and medium sockets, but not globes or wiring.

Description	Style No.	Ship. Wt. Lb.	List Price Each
One-light.....	340963	65	\$25 00
Three-light.....	340964	110	27 00
Four-light.....	340965	135	43 50

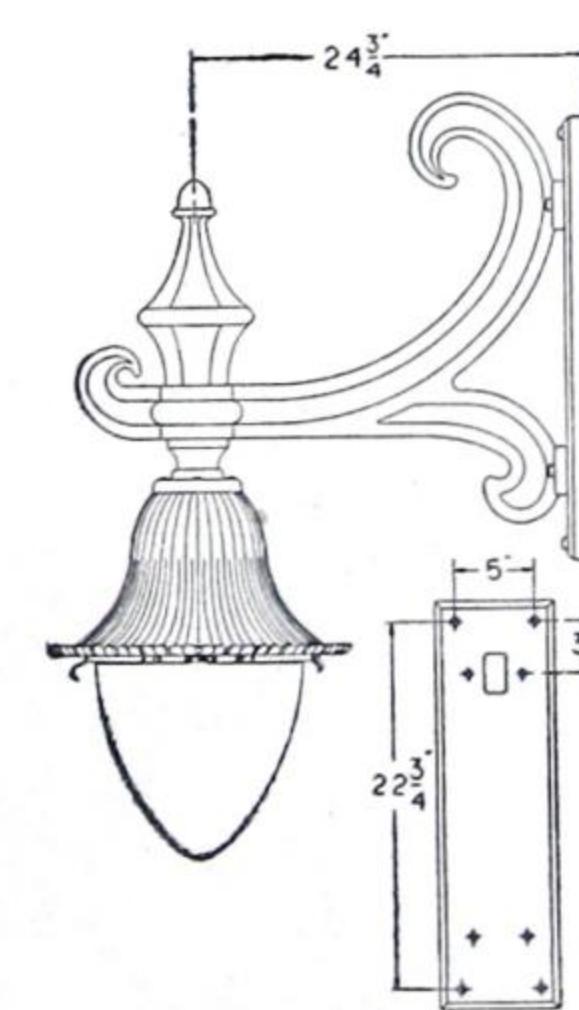


1-LIGHT CORRIDOR BRACKET

**Delphi Reversible Brackets**

This bracket may be used in the position illustrated or may be reversed if desired. It supports a Paragon Pendant which is designed for use with either a Holophane refractor or a Polaris globe as illustrated.

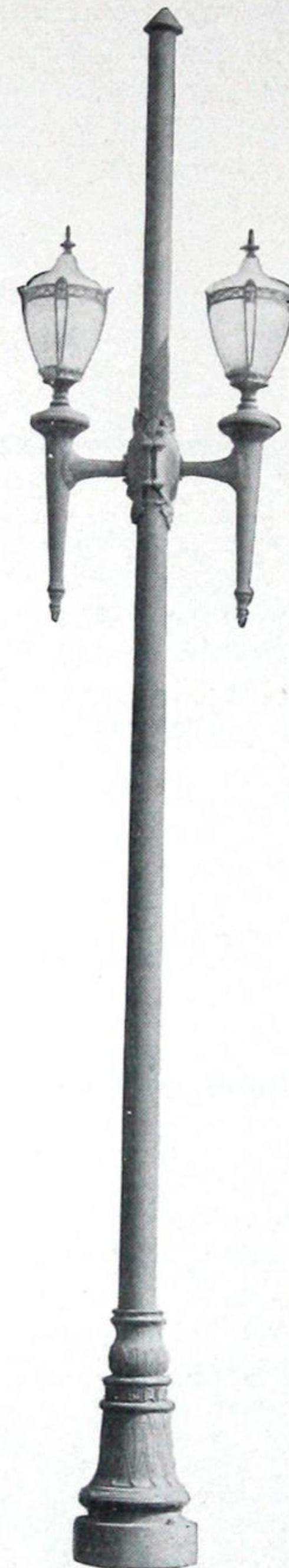
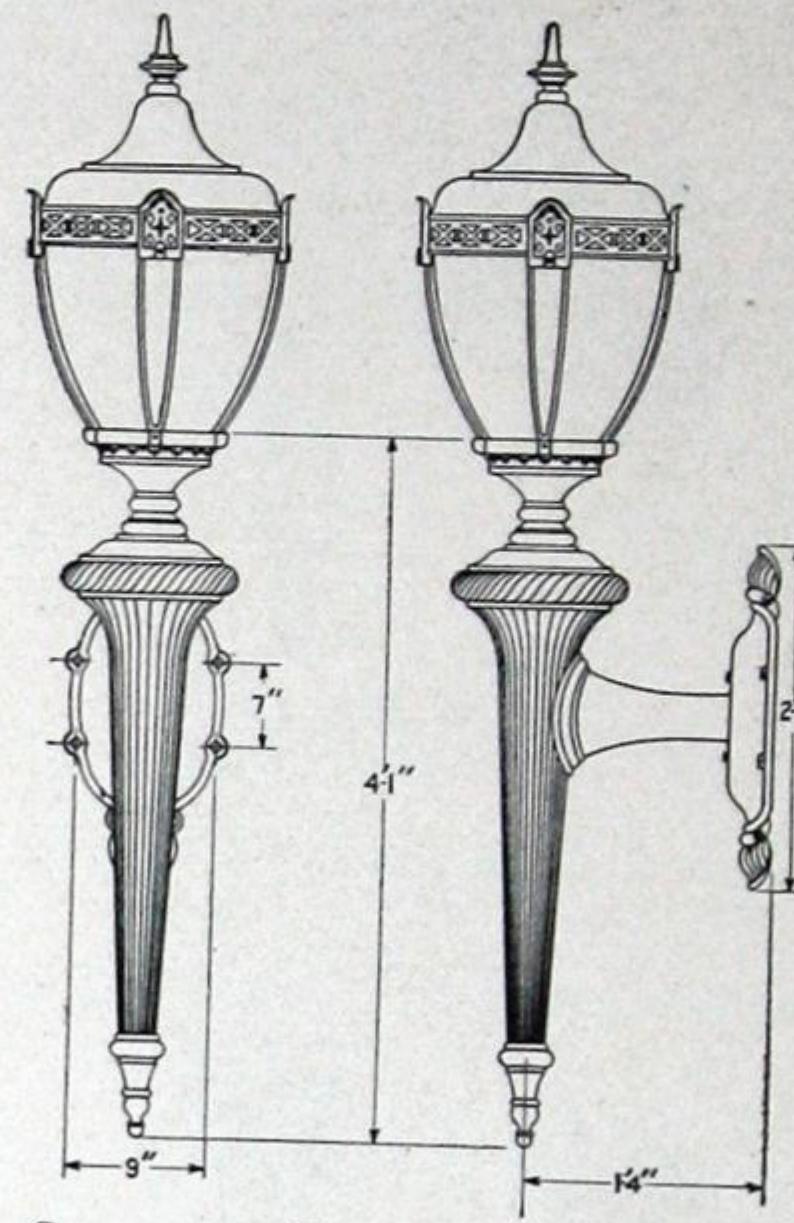
Description	Style No.	Ship. Wt. Lb.	List Price Ea.
Delphi Bracket....	352447	100	\$30 00



DELPHI REVERSIBLE BRACKET

**TROLLEYLITE BRACKETS**

COLUMBIAN TROLLEYLITE BRACKET

TROLLEY POLE EQUIPPED WITH COLUMBIAN  
BRACKETS, METROPOLIS BASE  
AND ACORN FINIAL

COLUMBIAN TROLLEYLITE BRACKET

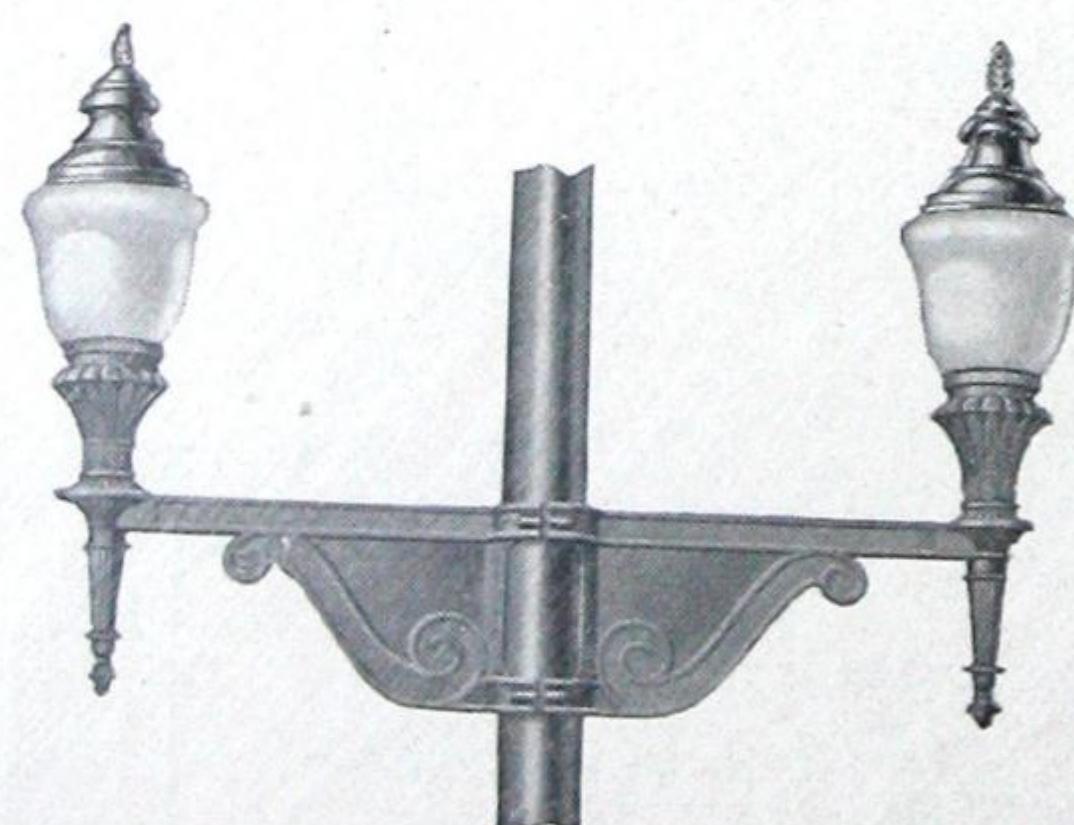
When conditions warrant the purely utilitarian trolley pole may be utilized as a street lighting unit. This is accomplished by the addition of either single or double ornamental brackets.

Westinghouse brackets are designed to support any Westinghouse lighting unit. Different styles of brackets are available so that a harmonious combination can be very easily secured. The use of trolleylite brackets provides an economical and attractive method of lighting streets on which trolley poles are already in place. The same types of lighting units may be used on both

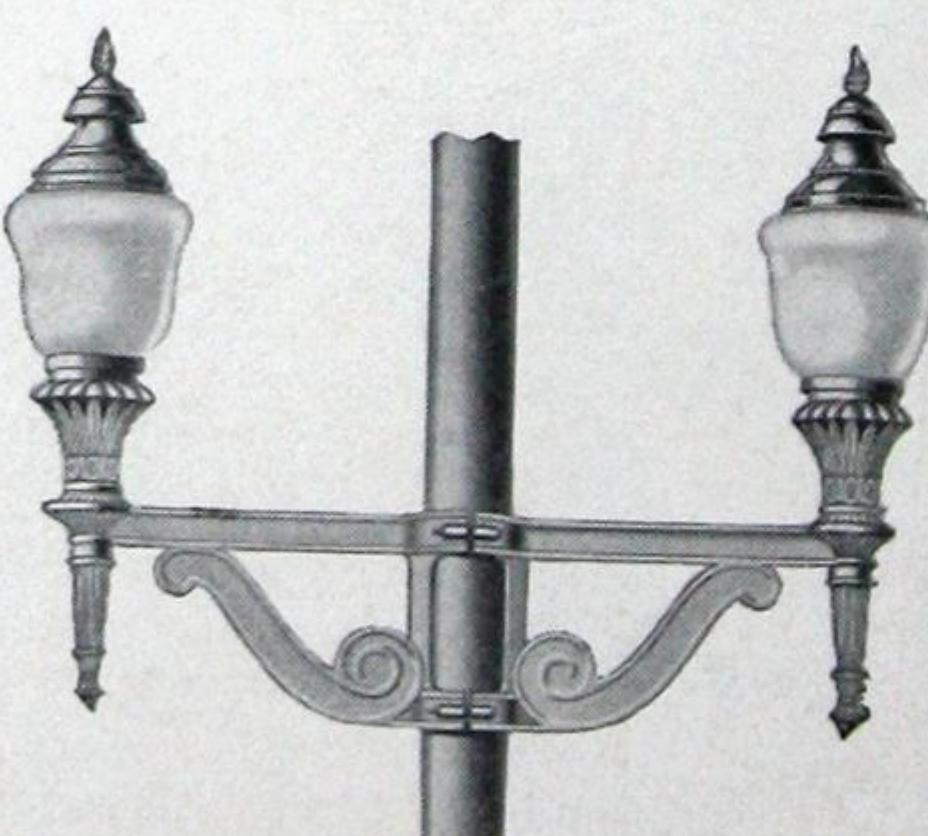
standards and trolleylite brackets, thus making the lighting units uniform in appearance throughout the city. Prices on double brackets will be furnished on request.

Further ornamentation of trolley poles may be secured by the addition of ornamental bases, etc. See page 887 for this equipment.

Style numbers cover brackets only; for prices on lighting units see pages 891 to 896. Prices on steel trolley poles will be furnished on application, For data on trolley poles see page 886.



AVENUE TROLLEYLITE BRACKET



PARKWAY TROLLEYLITE BRACKET

Dimensions are for reference only. For official dimensions apply to the nearest district office.

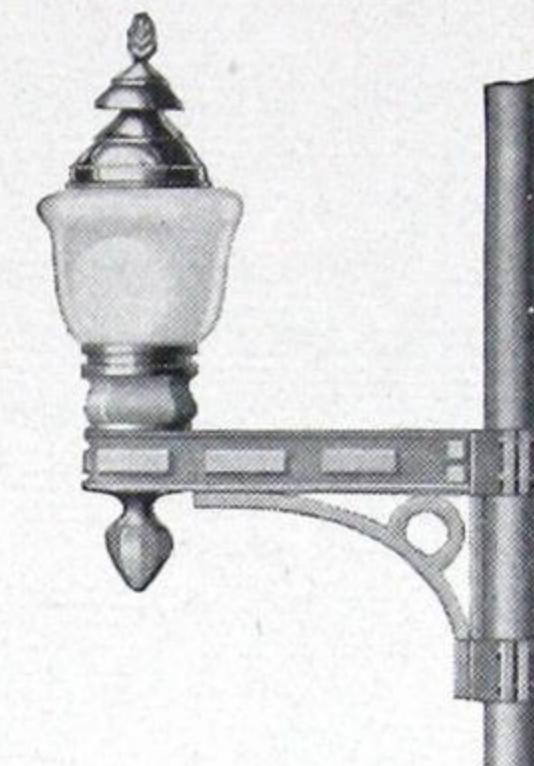
TROLLEYLITE BRACKETS—Continued



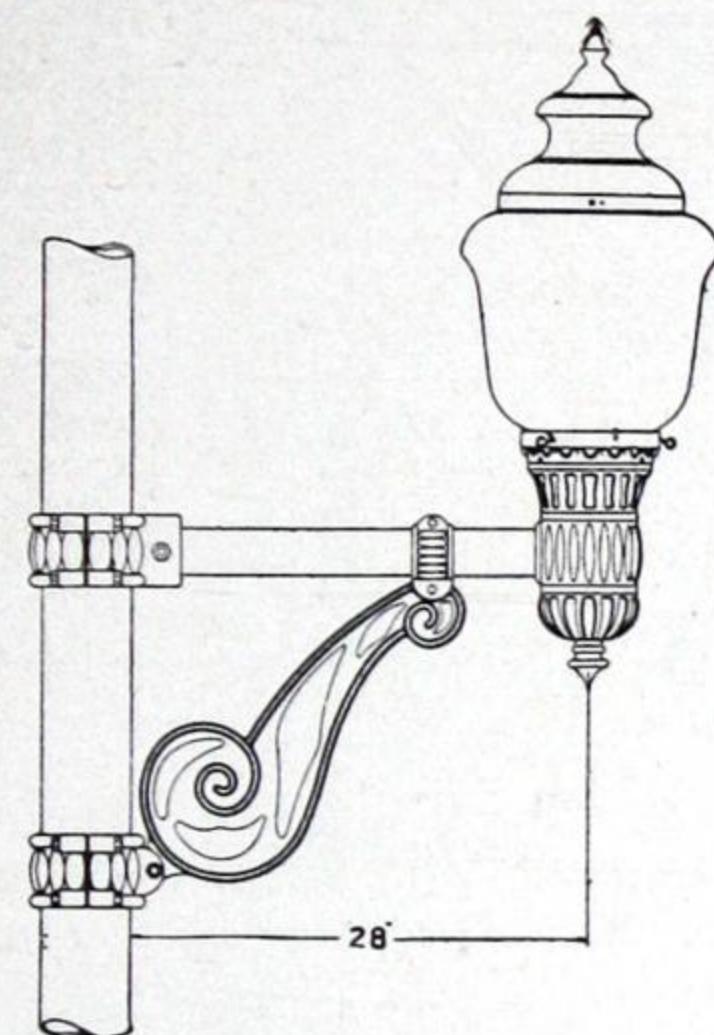
ZENITH TROLLEYLITE BRACKET FOR  
WOODEN POLE MOUNTING



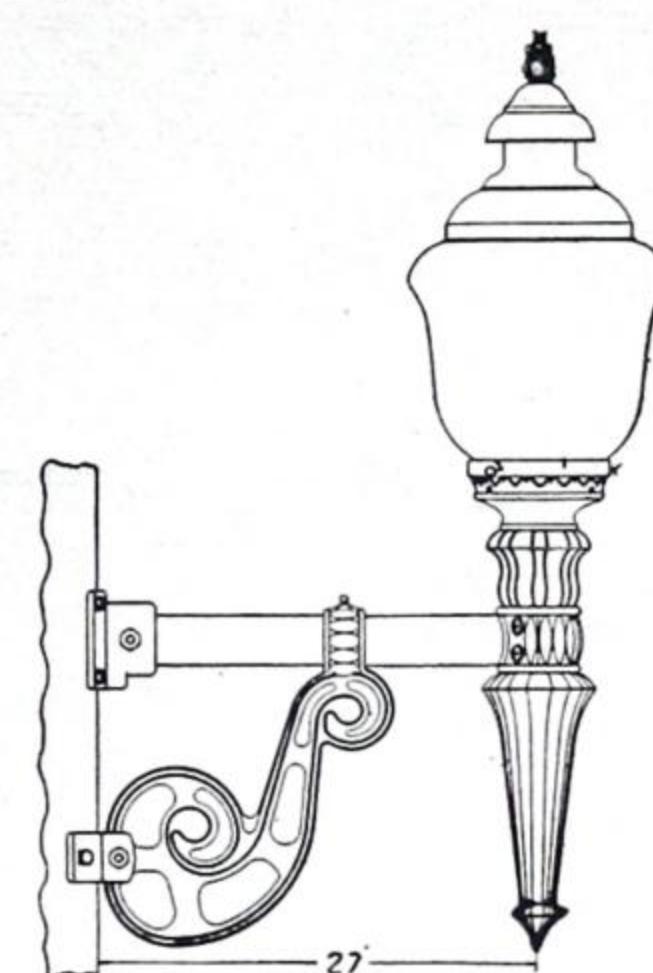
SOL-LUX JUNIOR TROLLEYLITE BRACKET  
FOR STEEL POLE MOUNTING



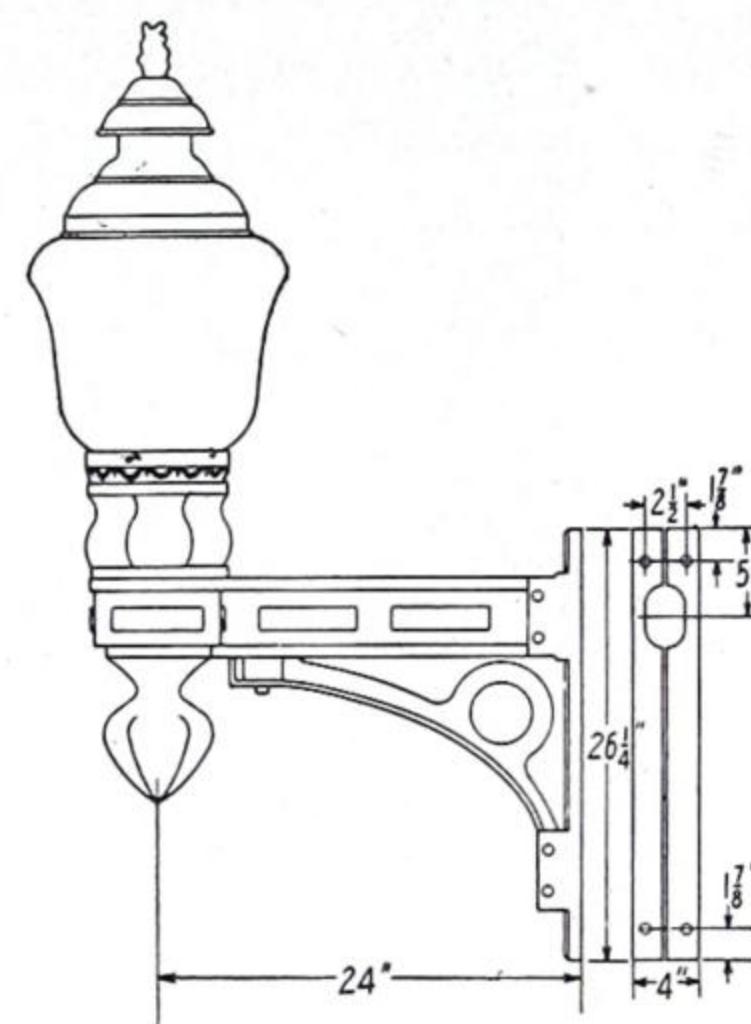
MUNICIPAL TROLLEYLITE BRACKET  
FOR STEEL POLE MOUNTING



ZENITH TROLLEYLITE BRACKET FOR  
STEEL POLE MOUNTING



SOL-LUX JUNIOR TROLLEYLITE BRACKET  
FOR WOODEN POLE MOUNTING



MUNICIPAL TROLLEYLITE BRACKET  
FOR WOODEN POLE MOUNTING

**Avenue Trolleylite Brackets**

Description	Style No.	Ship. Wt. Lb.	List Price
For 4-inch pipe.....	340972	220	\$90 00
For 5-inch pipe.....	340973	220	90 00
For 6-inch pipe.....	340974	220	90 00
For 7-inch pipe.....	340975	220	90 00

**Parkway Trolleylite Brackets**

Similar to the Avenue Trolleylite bracket, except shorter and lighter.

Distance from pole to center of globe, 30 inches. Height over all, 50 inches.

For 4-inch pipe.....	340980	190	80 00
For 5-inch pipe.....	340981	190	80 00
For 6-inch pipe.....	340982	190	80 00
For 7-inch pipe.....	340983	190	80 00

**Columbian Trolleylite Brackets**

Description	Style No.	Ship. Wt. Lb.	List Price
For 4-inch pipe.....	352381	160	\$100 00
For 5-inch pipe.....	352382	160	100 00
For 6-inch pipe.....	352383	160	100 00
For 7-inch pipe.....	352384	160	100 00
For wooden pole.....	352380	160	100 00

**Zenith Trolleylite Brackets**

For 4-inch pipe.....	352386	160	100 00
For 5-inch pipe.....	352387	160	100 00
For 6-inch pipe.....	352388	160	100 00
For 7-inch pipe.....	352389	160	100 00
For wooden pole.....	352385	160	100 00

**Sol-Lux Junior Trolleylite Brackets**

For 4-inch pipe.....	342088	160	62 50
For 5-inch pipe.....	342089	160	62 50
For 6-inch pipe.....	342090	160	62 50
For 7-inch pipe.....	342091	160	62 50
For wooden poles.....	342985	160	62 50

**Municipal Trolleylite Brackets**

For 4-inch pipe.....	340967	150	80 00
For 5-inch pipe.....	340968	150	80 00
For 6-inch pipe.....	340969	150	80 00
For 7-inch pipe.....	340970	150	80 00
For wooden poles.....	340971	150	80 00

The above brackets are complete with casing but without globe rings or lighting units. For lighting units see pages 891-896. If mogul multiple socket is used, deduct \$1.00 list for each socket; for medium multiple socket, deduct \$1.10 each list.

Prices do not include poles but prices on tubular steel trolley poles will be furnished on request.

The brackets above can also be furnished as double arm brackets or can be arranged for mounting on expanded metal poles.

Prices will be furnished on request.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

**TUBULAR STEEL TROLLEY POLES**

Tubular steel poles are used in street lighting when trolley line construction must necessarily be combined with the street lighting system. Ornamental lighting brackets and ornamental pole

fixtures for this purpose are listed and illustrated on other pages of this catalogue. The following table gives the essential details of the tubular steel poles most often used in this work. A 30-foot

pole of seven-inch, six-inch, and five-inch sections is used most. All of these poles are made of standard weight pipe. Diameters are indicated on the following page. Prices on request.

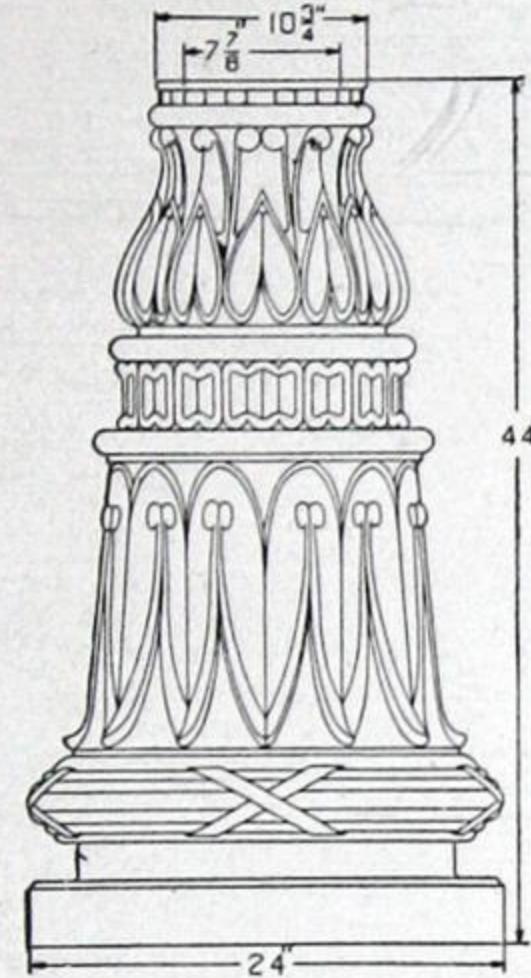
**PHYSICAL DATA**

Length in Feet	LENGTH OF SECTIONS IN FEET						Weight Lb.	Max. Vertical Load, Lb.
	4-inch Dia.	5-inch Dia.	6-inch Dia.	7-inch Dia.	8-inch Dia.	9-inch Dia.		
25	4	5	19	...	...	...	477	1092
25	..	4	5	19	...	...	600	1569
25	..	....	4	5	19	...	737	2161
25	..	....	....	4	5	19	881	2875
26	4	6.5	18.5	...	...	...	490	1032
26	..	4	6.5	18.5	...	...	617	1484
26	..	....	4	6.5	18.5	...	758	2044
26	..	....	....	4	6.5	18.5	907	2719
27	5	6.5	18.5	...	...	...	500	980
27	..	5	6.5	18.5	...	...	631	1408
27	..	....	5	6.5	18.5	...	777	1940
27	..	....	....	5	6.5	18.5	931	2580
28	5	7	19	...	...	...	517	932
28	..	5	7	19	...	...	653	1339
28	..	....	5	7	19	...	803	1845
28	..	....	....	5	7	19	962	2454
29	4	7	21	...	...	...	544	889
29	..	4	7	21	...	...	685	1277
29	..	....	4	7	...	...	841	1759
29	..	....	....	4	7	21	1006	2340
30	5	7	21	...	...	...	555	849
30	..	5	7	21	...	...	700	1220
30	..	....	5	7	21	...	860	1681
30	..	....	....	5	7	21	1030	2236
31	5	10.5	18.5	...	...	...	559	813
31	..	5	10.5	18.5	...	...	707	1168
31	..	....	5	10.5	18.5	...	871	1609
31	..	....	....	5	10.5	18.5	1045	2141
32	7	7	21	...	...	...	577	780
32	..	7	7	21	...	...	729	1120
32	..	....	7	7	21	...	898	1544
32	..	....	....	7	7	21	1077	2053
33	7	10.5	18.5	...	...	...	580	749
33	..	7	10.5	18.5	...	...	737	1076
33	..	....	7	10.5	18.5	...	909	1483
33	..	....	....	7	10.5	18.5	1092	1973
34	7	10.5	19.5	...	...	...	599	721
34	..	7	10.5	19.5	...	...	760	1036
34	..	....	7	10.5	19.5	...	938	1427
34	..	....	....	7	10.5	19.5	1126	1898
35	7	10	21	...	...	...	621	695
35	..	7	10	21	...	...	786	998
35	..	....	7	10	21	...	969	1375
35	..	....	....	7	10	21	1162	1829

## ORNAMENTAL EQUIPMENT FOR TROLLEY POLES



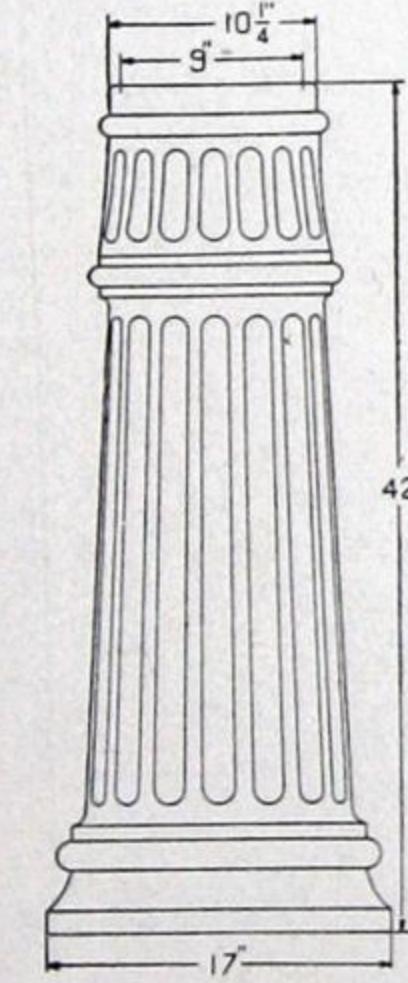
ACORN FINIAL



METROPOLIS TROLLEY  
BASE



WINSLOW TROLLEY  
BASE

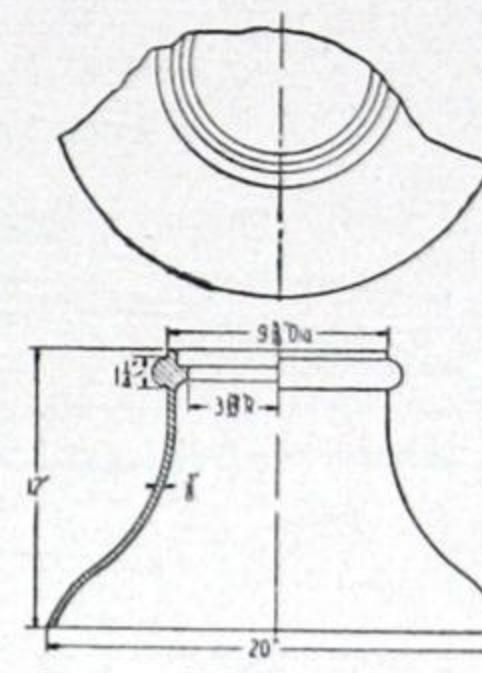


HAWTHORNE TROLLEY  
BASE

### ACORN TROLLEY POLE FINIALS

A cast-iron ornament for the top of tubular steel trolley poles.

Description	Style No.	Ship. Wt. Lb.	List Price
For 2 1/2-inch pipe.....	335603	3	\$2 50
For 3-inch pipe.....	339608	5	3 00
For 4-inch pipe.....	339387	8	3 50
For 5-inch pipe.....	339718	10	4 00
For 6-inch pipe.....	350015	15	4 50



PLAIN WHEEL GUARD

### PLAIN WHEEL GUARDS

A cast-iron base to slip over tubular steel poles to protect the pole from being damaged by the wheels of vehicles.

For 6-inch pipe.....	351398	68	21 00
For 7-inch pipe.....	351399	68	22 00
For 8-inch pipe.....	351400	68	23 00

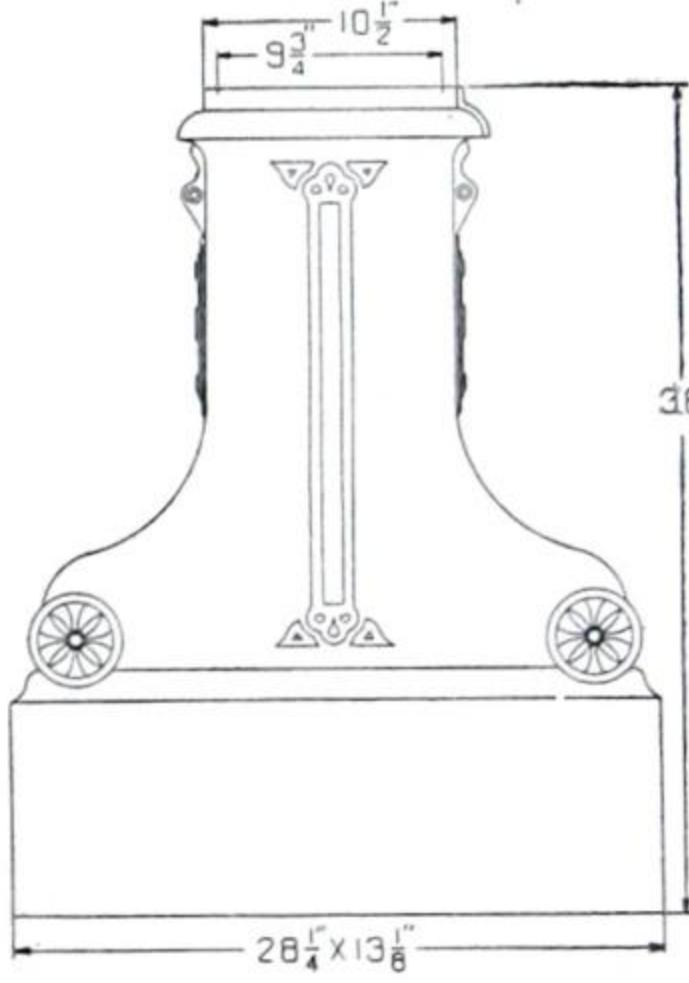


METROPOLIS TROLLEY  
BASE

### METROPOLIS TROLLEY BASES

For ornamenting tubular steel trolley poles. Designed to slip over the pole during erection.

For 5-inch pipe.....	353172	375	100 00
For 6-inch pipe.....	335597	385	104 00
For 7-inch pipe.....	335595	410	108 00
For 8-inch pipe.....	353173	430	112 00
For 9-inch pipe.....	335596	450	116 00

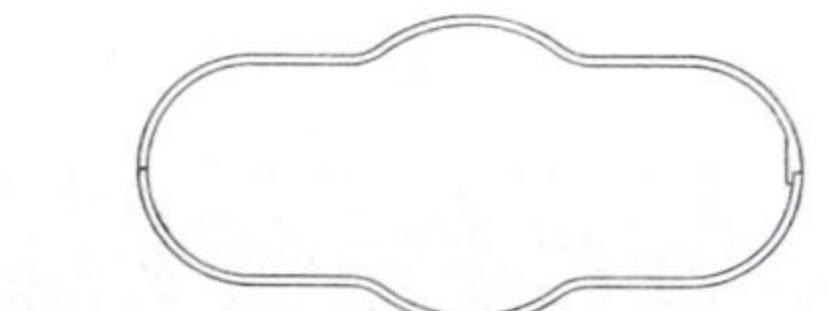


WINSLOW TROLLEY BASE

### WINSLOW TROLLEY BASES

An ornamental base of attractive design which is made in two sections which can be easily bolted together. Has an interchangeable collar at the top which allows it to be used with poles of different diameters. The bottom is eccentric in shape and has ample space for the installation of safety coils when required.

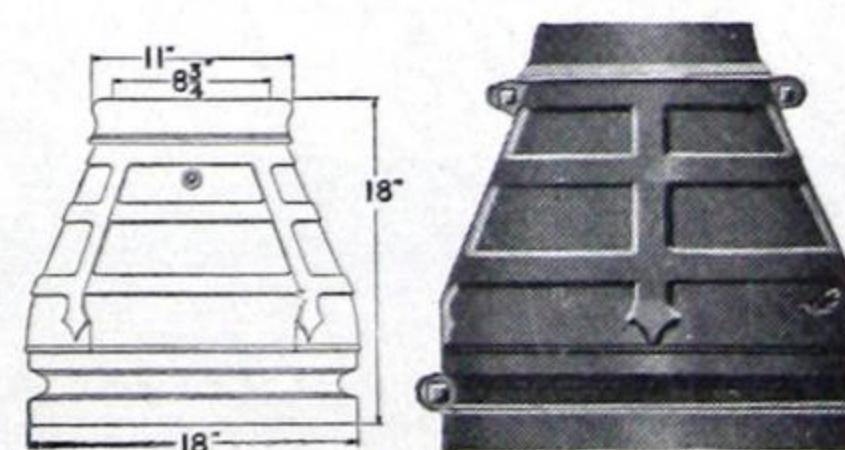
Description	Style No.	Ship. Wt. Lb.	List Price
For 7-inch pipe.....	352363	130	\$70 00
For 8-inch pipe.....	352364	130	72 00
For 9-inch pipe.....	352365	130	74 00



### HAWTHORNE TROLLEY BASES

A light weight base for sliding over trolley poles of six, seven and eight inch diameters.

For 6-inch pipe.....	353810	120	45 00
For 7-inch pipe.....	352366	135	47 00
For 8-inch pipe.....	352367	150	49 00



DUQUESNE TROLLEY BASE

### DUQUESNE TROLLEY BASES

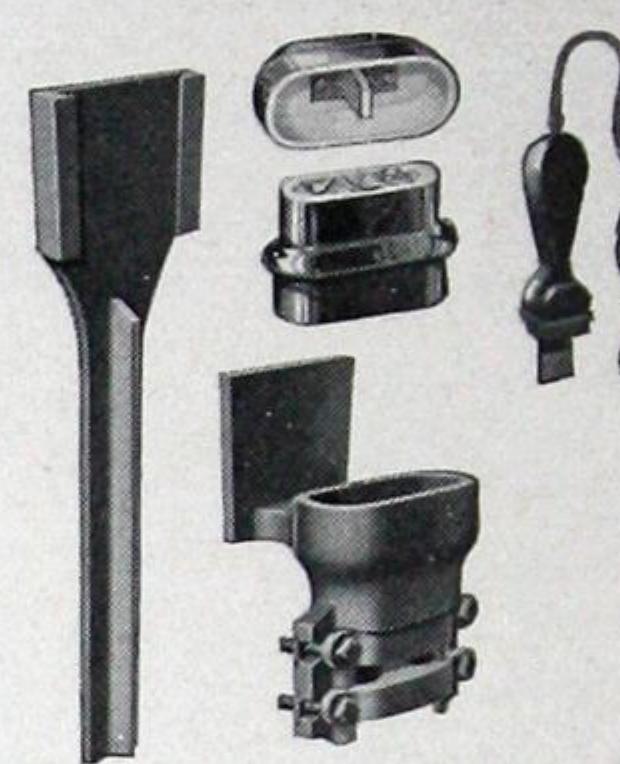
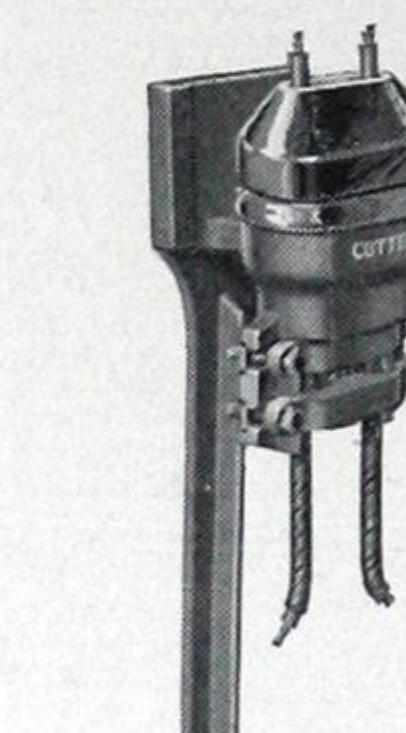
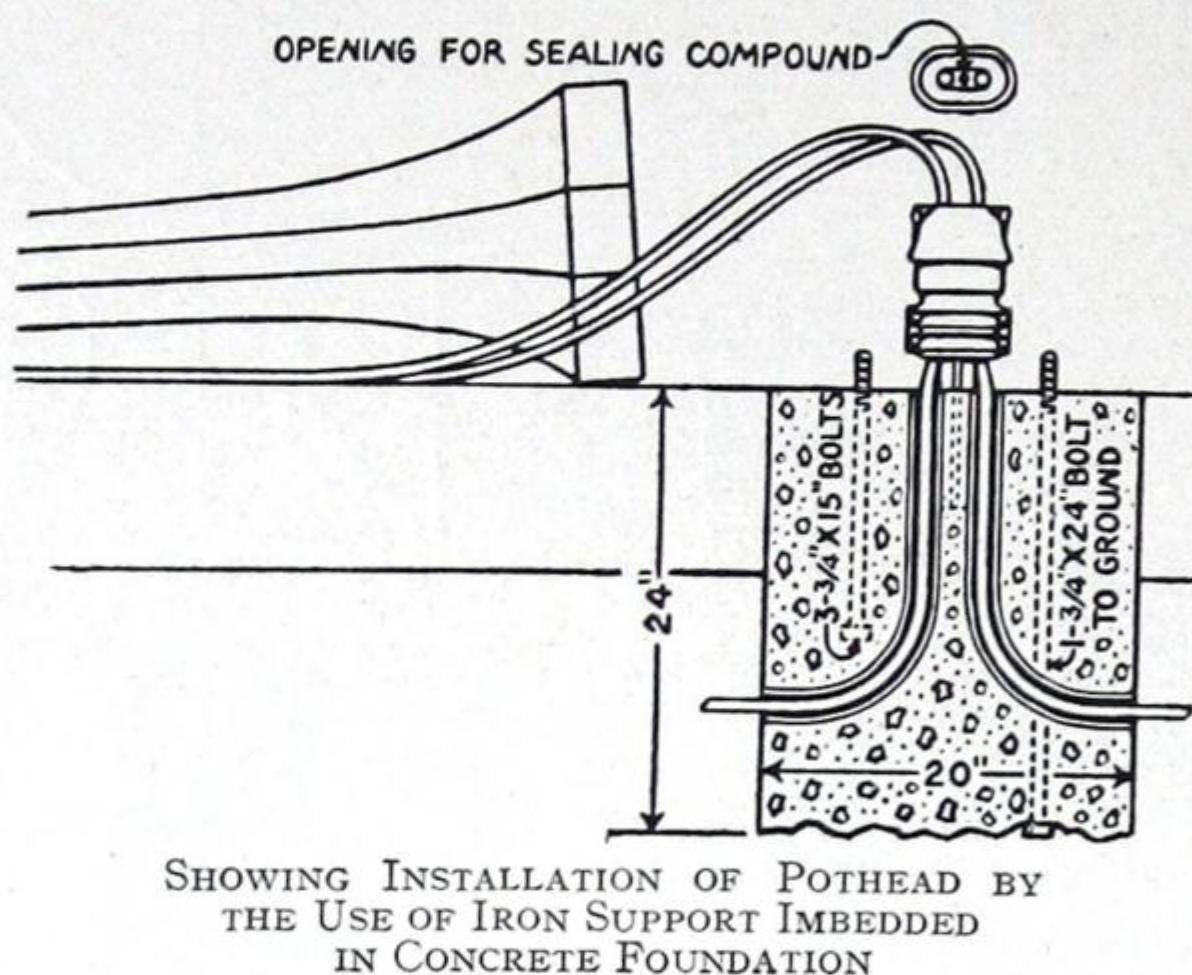
For 5-inch pipe.....	351762	100	25 00
For 6-inch pipe.....	351763	100	25 00
For 7-inch pipe.....	351764	100	25 00

Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

7-366C

## ACCESSORIES FOR CAST-IRON STANDARDS POTHEADS



It is necessary to bring the distribution cable above the surface of the ground at each post location and open it for making connections to the inside wiring of the posts. In installations of this kind, static discharges may occur frequently. These will result in ultimately breaking down the insulation, causing interruption of service unless some means is provided to carry the static current to ground.

Such troubles are entirely eliminated by installing a pothead at the base of each post. This device clamps together the lead and steel coverings of the cable and connects them to ground through the base of the post or the ground support as illustrated. The porcelain body forms a receptacle where the cables are connected and sealed in with insulating compound.

The Disconnecting Pothead has a two-piece porcelain body so arranged that in the event of breakage of a post the upper part of the pothead is pulled off, thus disconnecting the wires in the

post from the underground system, which transmits power at a voltage which would endanger the lives of pedestrians or vehicle drivers coming in contact with them in the event that the post was broken. Also, provision is made for the re-establishment of the circuit through contacts in the lower part of the

pothead, with the result that the remaining lamps in the system continue in operation.

An iron bracket support should be imbedded in the concrete foundation, and the connections to the cable made before raising the column upon its foundation.

Description	Style No.	Wt. Lb., Each	List Price
Simple pothead complete.....	342643	16	\$6 00
C onsists of five parts as follows:			
Simple pothead porcelain.....	336052	3	1 00
Pothead body casting.....	336157	5	2 10
2 clamps.....	336158	1	1 25
Ground support.....	336127	5	1 50
Sealing compound (1-lb.).....	341911	1	15
Disconnecting pothead complete.....	343165	17	12 00
C onsists of five parts as follows:			
Disconnecting pothead porcelain.....	336130	4	7 00
Pothead body casting.....	336157	5	2 10
2 clamps.....	336158	1	1 25
Ground support.....	336127	5	1 50
Sealing compound (1 lb.).....	341911	1	15
Ground test plug.....	336045	1	3 00

### HEAVY DUTY EXPANSION BOLTS

These bolts may be used whenever posts are to be fastened to concrete sidewalks and when brackets are to be mounted on concrete, brick or stone walls. Their holding power exceeds that of standard machine bolts. They save 50 to 75 per cent of drilling costs. Furnished in sets of four.

Length Inches	Diameter Inches	Style No.	Ship. Wt. Lb., per 100	List Price per Set
4 1/2	5/8	335576	70	\$1 25
6	5/8	335577	80	1 50
9	5/8	335578	90	1 75
12	5/8	335579	100	2 00
4 Spacing sleeves extra		335580	20	20
4 Sec. expansive units		335581	30	90

### FOUNDATION BOLTS

For foundation bolts see Machine Bolts listed in Section 6-E. Bolts 15 inches long and 3/4-inch diameter are recommended for all standards.

*Order by Style Number*

## JIFFY GLOBE-HOLDERS

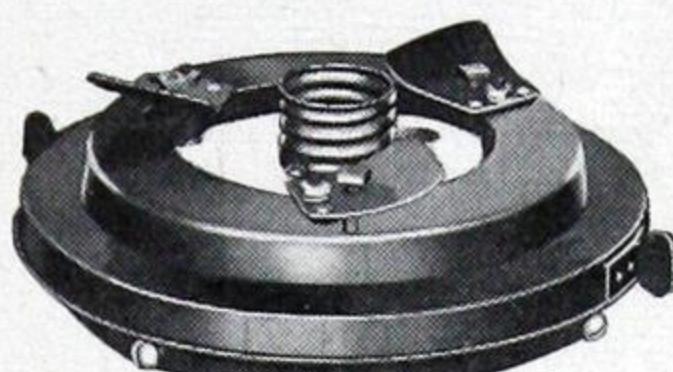


FIG. 1—OPENED POSITION

### Application

The Jiffy globe-holder is designed to eliminate globe breakage and economize in the maintenance of ornamental street lighting systems. This device is arranged to hold the globe more securely than any other type of holder on the market, yet a simple rotating movement permits instant removal of the globe. It is intended for use with ornamental upright globes of various designs having standard 8-inch and 9 $\frac{1}{8}$ -inch bottom fitters. It is not adapted for use with lantern type lighting units or those having an ornamental framework surrounding the globe.

The Jiffy globe-holder can be mounted directly on any lighting standard, newel, bracket or casing having a type A fitter. For other standards special adapters will be furnished.

### Distinctive Features

The Jiffy globe-holder, as its name implies, saves much time in the cleaning and maintenance of lighting units.

Adjustment is provided for variations in tolerance in globes of various sizes. This adjustment is permanent, the

adjusting screws being automatically locked in position.

Jiffy globe-holders are in service in a number of cities and have brought about substantial savings in maintenance costs. In one city the annual cost of replacing broken globes amounted to approximately five dollars per standard. The use of the Jiffy globe-holder reduced this loss to almost nothing. It was discovered that the cleaning crew could clean twice as many globes as before and so with the same crew, globes were cleaned at shorter intervals, resulting in greatly improved appearance and efficiency of the lighting system.

### Operation

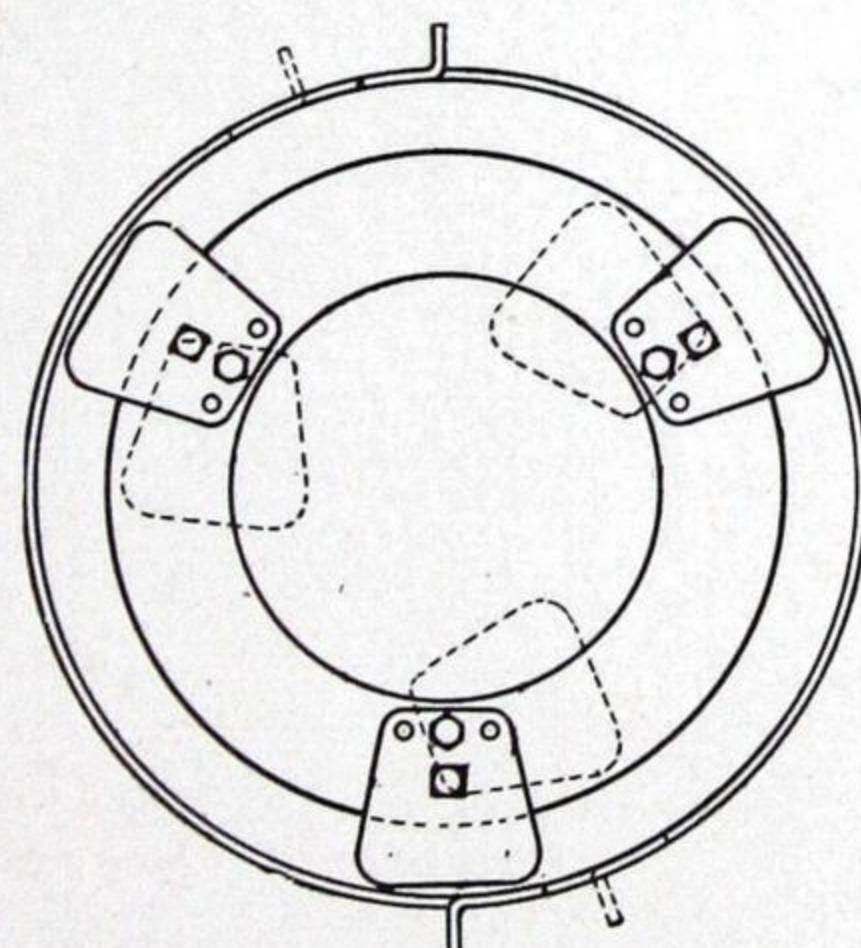
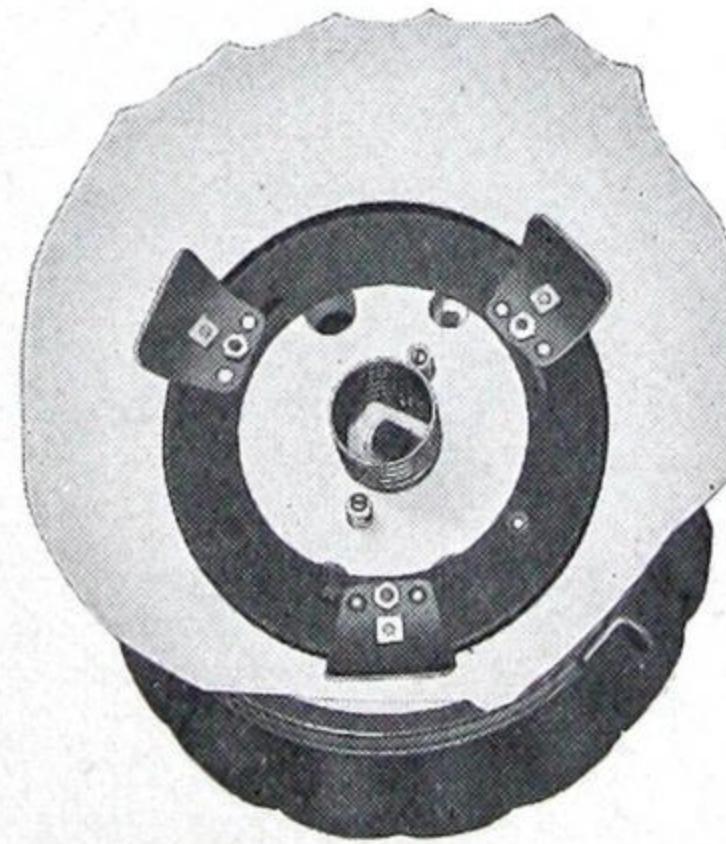
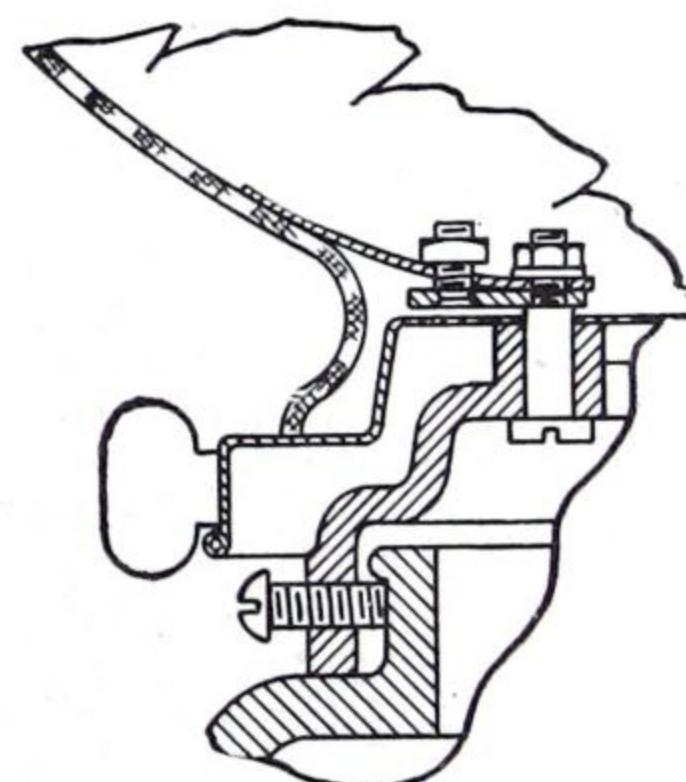
The Jiffy globe-holder is instantaneous in operation. Two lugs are provided on the outer edge of the globe seat to facilitate opening and closing. To remove the globe it is only necessary to rotate the globe seat in a counter clockwise direction through an angle of about 30°. This motion actuates the clips which release the globe by taking the position shown by the dotted lines in Fig. 2. With the clips in this position the globe is free to be removed. To lock the globe it is

only necessary to rotate the globe seat in a clockwise direction. This motion actuates the clips to grip the globe firmly in position. The rotating parts are automatically locked in both open and closed positions and can be changed by manual means only.

### Construction

The Jiffy globe-holder is scientifically designed to prevent breakage of globes due to vibration, jars or impacts to which street lighting standards are often subjected. It is constructed to absorb all shocks which ordinarily destroy glassware. Globes are held in place so firmly that breakage from windstorms is entirely eliminated. The glassware rests on a resilient bronze seat and is secured in position by sliding phosphor bronze clips on the inside of the globe. There are no screws to come in contact with the glass, to rust tight, or to work loose through vibration.

Expansion and contraction due to temperature variation do not materially change the grasp upon the globe or affect the operation of the holder. Water cannot collect and freeze on the moving parts and prevent removal of globe.

FIG. 2—OPENED (DOTTED) AND CLOSED (SOLID)  
POSITIONS OF HOLDING CLIPSFIG. 3—CLOSED POSITION,  
LOOKING DOWNWARDFIG. 4—SHOWING GLOBE LOCKED  
IN HOLDING POSITION

### LIST PRICES

Description	
For globes with 8-inch bottom fitters . . . . .	
For globes with 9 $\frac{1}{8}$ -inch bottom fitters . . . . .	

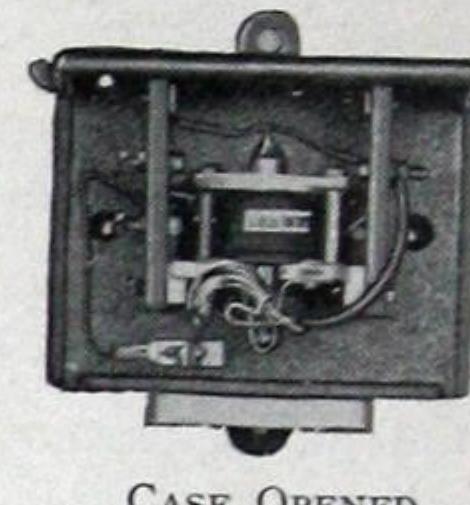
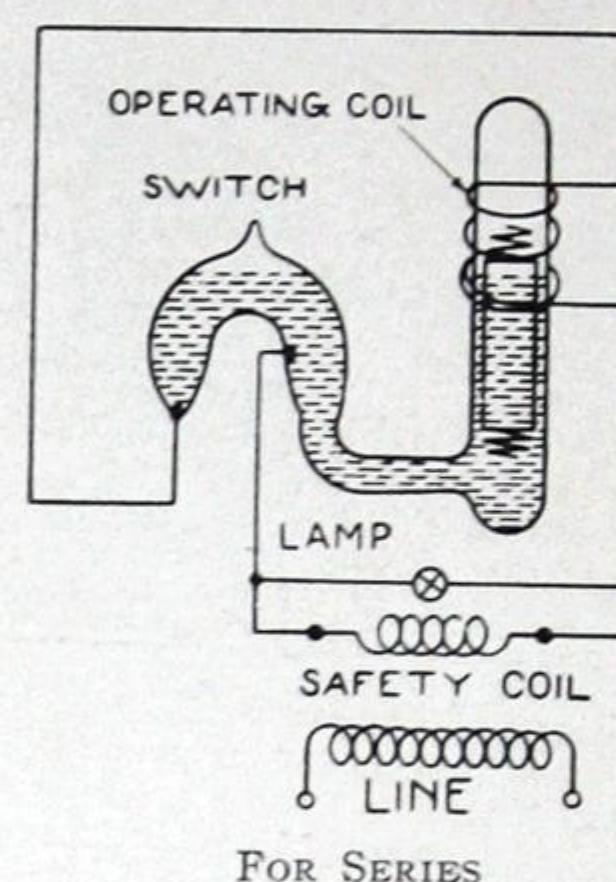
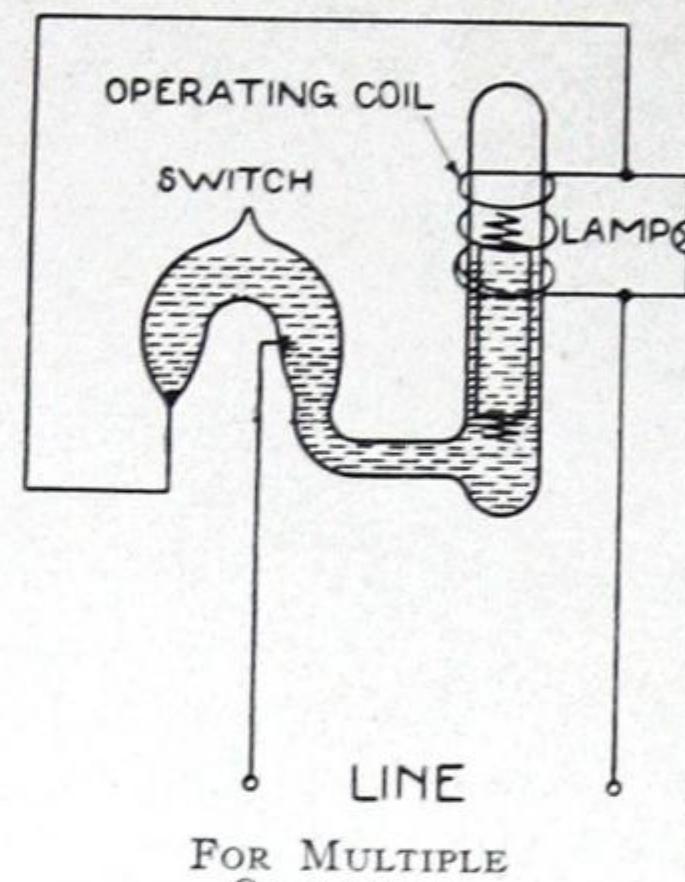
Style No.	Ship. Wt., Lb.	List Price Each
346124	4	\$10 00
346125	4	10 00

Order by Style Number

## MERCURY CONTACT FLASHERS



CASE CLOSED



CASE OPENED

The most effective lighting devices for warning and controlling motor traffic are of the intermittent flashing type. Various control mechanisms for producing the flashing effect are employed, but the simplest, most positive and most durable of these is the mercury contact flasher.

The mercury flasher consists essentially of a vacuum tube of special shape enclosing a steel plunger and a quantity of mercury.

The tube is made up of a vertical section which contains the plunger and an inverted U section connected by a short horizontal section. Contacts are placed

on either side of the U section in such positions that when the tube is filled with mercury an electrical circuit is established between them. Mercury is free to flow through the horizontal section. The plunger is operated by a solenoid to change the level of the mercury which opens and closes the circuit between the two contacts.

**Operation**—When installed and connected in an electrical circuit the operation is as follows:

Current flows through the operating coil and lamp. The current through the operating coil or solenoid will lift the plunger, causing a difference in level of mercury between the two sections of the tube. The mercury rises in the vertical section and falls in the U section breaking the connection between the two contacts. This breaks the circuit through the lamp and operating coil and allows the plunger to fall. The plunger floating on the mercury in the vertical section causes the mercury to rise in the U section and contact is reestablished, completing the cycle.

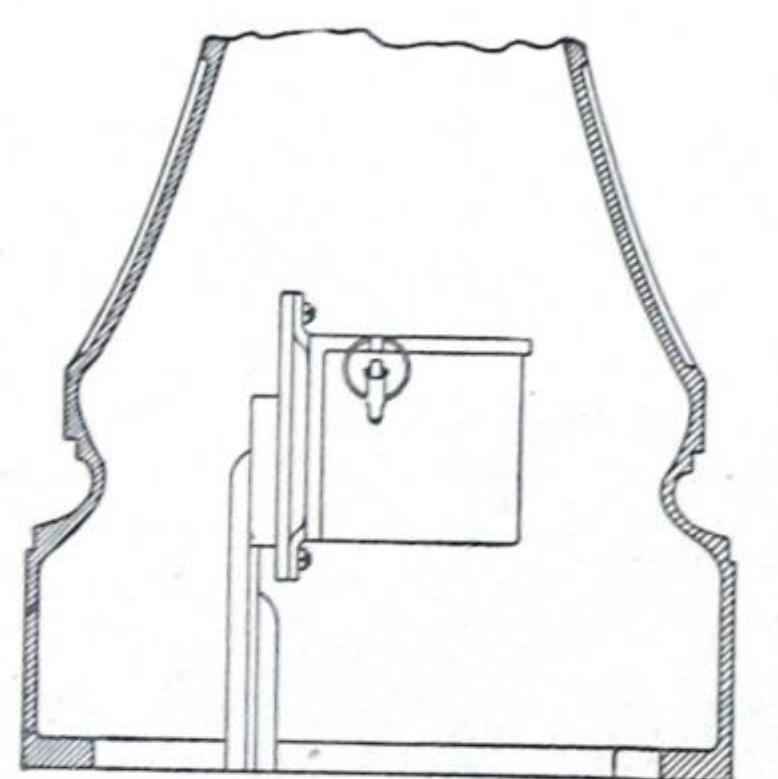
The flasher may be mounted either in the base or in the casing of ornamental standards or mounted on wood

poles and used with overhead fixtures.

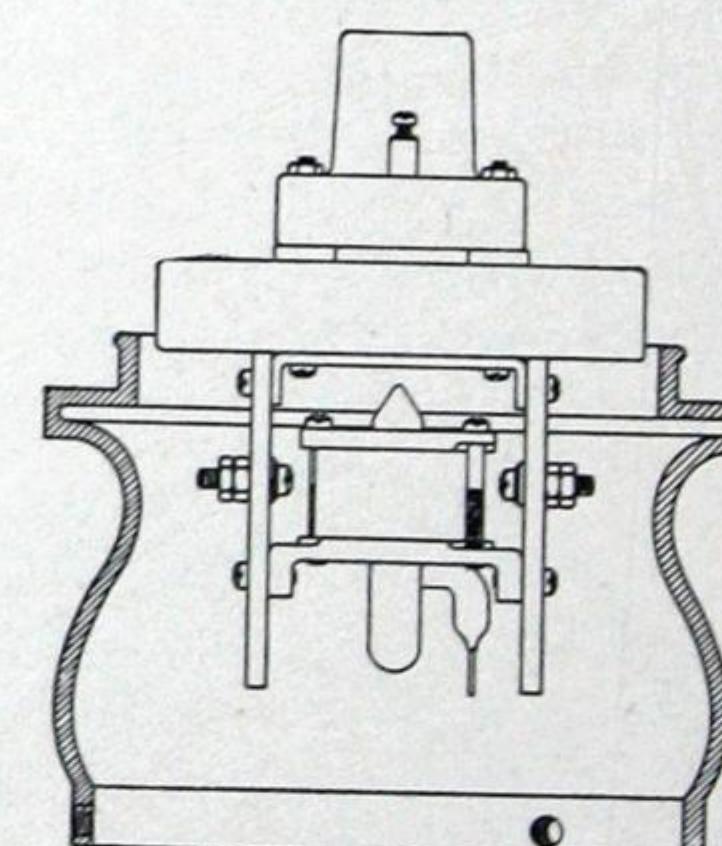
The multiple type is designed for 110 volts a-c. and the series type for 6.6 amperes a-c. Either can be used to control any size standard lamps.

By rearranging the connections the flasher can be used as a relay for the control of street lighting circuits. The contacts are capable of breaking 30 amperes continually. Tubes on life tests have broken a 5-ampere circuit over 18,000,000 times.

**Shipping**—To facilitate shipment tubes are not assembled in the units but are carefully packed in separate containers.



METHOD OF MOUNTING FLASHER IN BASE OF CAST-IRON STANDARD



METHOD OF MOUNTING FLASHER IN CASING

### LIST PRICES

#### Description

Mounted in cast-iron case, without tube.....  
Mounted on disc insulator, without tube.....  
Mercury tube for either of above.....

#### For Multiple Operation

Style No.	Ship. Wt. Lb. Ea.	List Price
352395	15	\$35 00
352396	15	35 00
352397	2	10 00

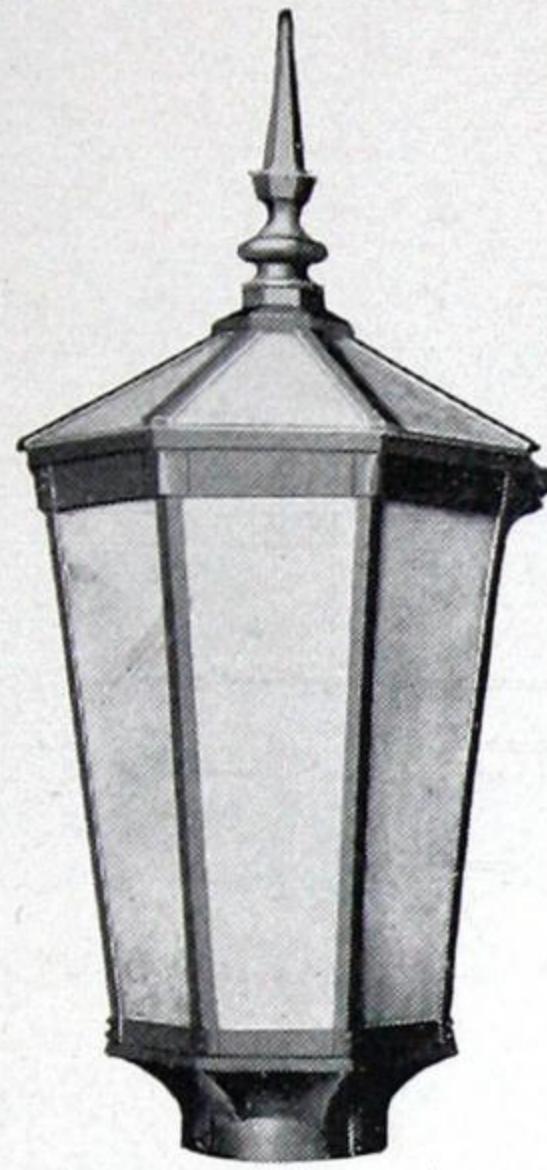
#### For Series Operation

352478	45	60 00
352479	45	60 00
352552	2	10 00

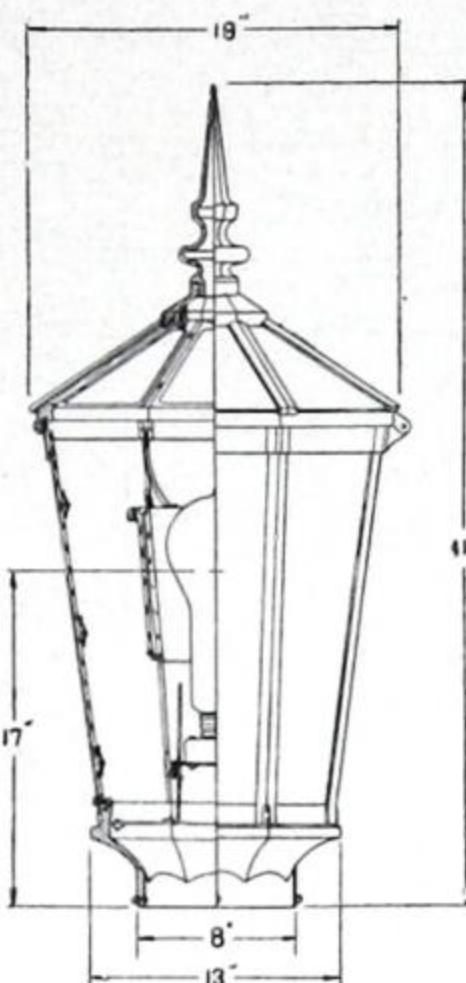
Order by Style Number

## OCTAGONAL LIGHTING UNITS

## SENIOR SIZE



OCTAGONAL SENIOR



OCTAGONAL SENIOR WITH SPURS

Experience has shown that the Octagonal lighting unit is not only attractive in appearance but adaptable to the lighting of many types of street. In addition to this its easily replaceable panels keeps down the cost of glassware replacements and its dust-proof construction makes maintenance charges very low.

This type of unit is furnished in two

sizes, junior and senior. An ornamental appearance is given to both by the use of spurs and finials. The design of the unit permits the use of either metal or glass panels in the canopy as desired. The glass in the canopy panels may be similar to that in the side panels or not, as desired. In downtown districts where lighting of the Super White Way type is desired, the use of glass canopy panels

increases the upward light on the building fronts, without appreciably affecting the downward distribution. The Bi-lux refractor may be used with either size of Octagonal unit. When so equipped the Octagonal unit is undoubtedly the most efficient unit available for street lighting purposes. Either size of Octagonal unit may be used on standards or brackets equipped with Type A fitters.

## LIST PRICES

## OCTAGONAL SENIOR LIGHTING UNIT

**Designed for Use with 300 to 1000-Watt Multiple Lamp and 4000, 6000 or 10,000-Lumen Series Type C Lamp\***

Style No.	Description	Ship. Wt. Lbs., Ea.	List Price
<b>WITH GLASS CANOPY</b>			
351642	With Standard film socket.....	110	\$102 00
351641	With mogul multiple socket.....	110	101 00
<b>Without Bi-lux Refractor</b>			
351310	With Standard film socket.....	100	82 00
351311	With mogul multiple socket.....	100	81 00
<b>WITH GLASS CANOPY AND SPURS</b>			
351706	With Standard film socket.....	110	107 00
351707	With mogul multiple socket.....	110	106 00
351709	With Standard film socket.....	100	87 00
351710	With mogul multiple socket.....	100	86 00
<b>WITH METAL CANOPY</b>			
351742	With Standard film socket.....	110	102 00
351744	With mogul multiple socket.....	110	101 00
351745	With Standard film socket.....	100	82 00
351747	With mogul multiple socket.....	100	81 00
<b>WITH METAL CANOPY AND SPURS</b>			
351748	With Standard film socket.....	110	107 00
351750	With mogul multiple socket.....	110	106 00
351751	With Standard film socket.....	100	87 00
351753	With mogul multiple socket.....	100	86 00

\*Prices do not include lamp.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

Order by Style Number

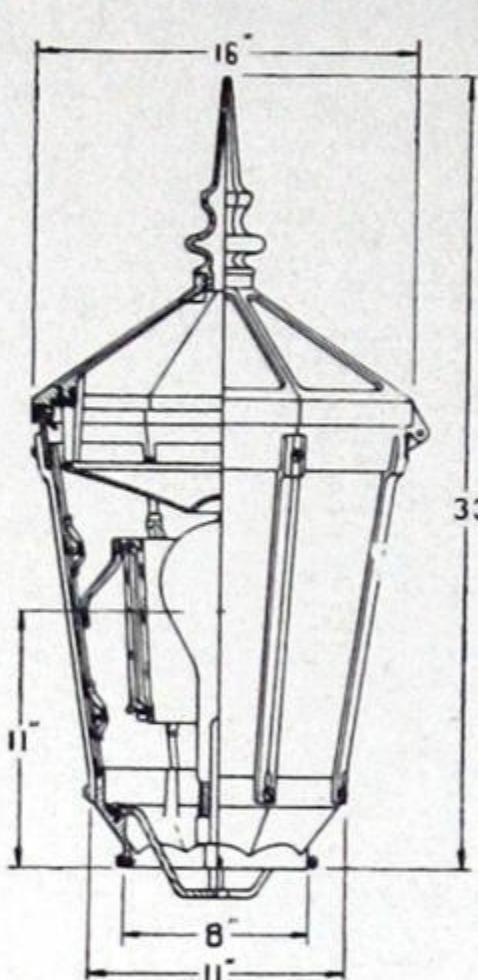
7-460A

## OCTAGONAL LIGHTING UNITS—Continued

## JUNIOR SIZE



OCTAGONAL JUNIOR



OCTAGONAL JUNIOR WITH SPURS

Used on standards, brackets and globe holders equipped with Type A fitters.

## LIST PRICES

## OCTAGONAL JUNIOR LIGHTING UNITS

**Designed for Use with 500-Watt or Smaller Multiple Lamp and 10,000-Lumen or Smaller Series Type C Lamp\***

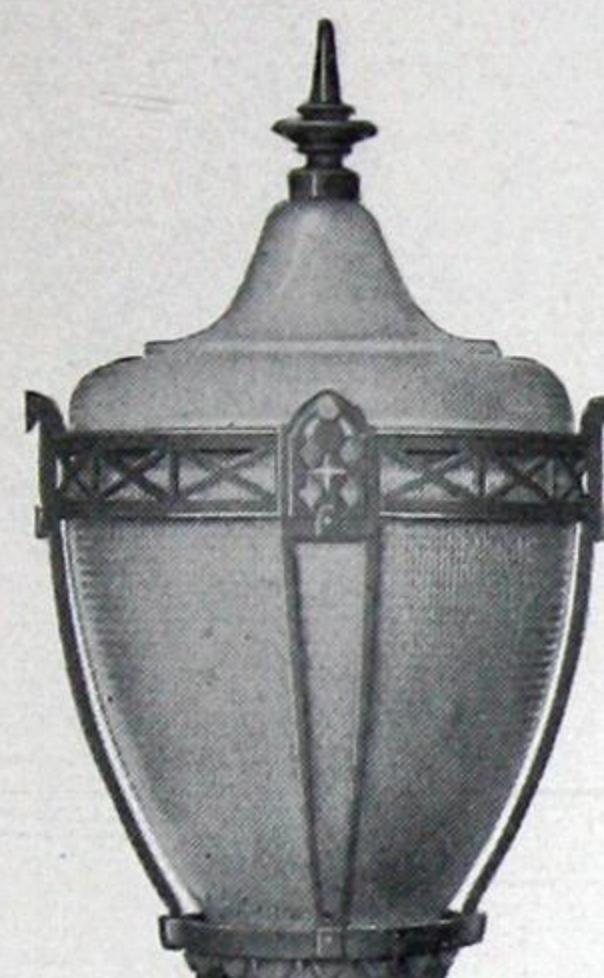
Style No.	Description	Ship. Wt. Lb. Ea.	List Price
<b>WITH GLASS CANOPY</b>			
<b>With Bi-lux Refractor</b>			
351711	With Standard film socket.....	90	\$63 00
351713	With mogul multiple socket.....	90	62 00
<b>Without Bi-lux Refractor</b>			
351719	With Standard film socket.....	80	43 00
351721	With mogul multiple socket.....	80	42 00
<b>WITH GLASS CANOPY AND SPURS</b>			
<b>With Bi-lux Refractor</b>			
351715	With Standard film socket.....	90	69 00
351717	With mogul multiple socket.....	90	68 00
<b>Without Bi-lux Refractor</b>			
351723	With Standard film socket.....	80	49 00
351725	With mogul multiple socket.....	80	48 00
<b>WITH METAL CANOPY</b>			
<b>With Bi-lux Refractor</b>			
351646	With Standard film socket.....	90	61 00
351647	With mogul multiple socket.....	90	60 00
<b>Without Bi-lux Refractor</b>			
351321	With Standard film socket.....	80	41 00
351323	With mogul multiple socket.....	80	40 00
<b>WITH METAL CANOPY AND SPURS</b>			
<b>With Bi-lux Refractor</b>			
351728	With Standard film socket.....	90	67 00
351730	With mogul multiple socket.....	90	66 00
<b>Without Bi-lux Refractor</b>			
351732	With Standard film socket.....	80	47 00
351734	With mogul multiple socket.....	80	46 00

\*Prices do not include lamp.

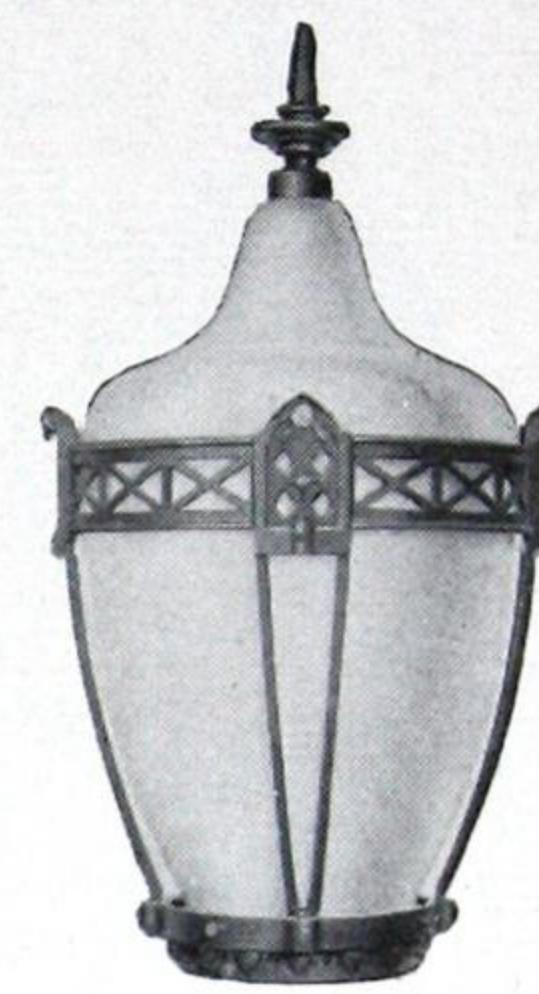
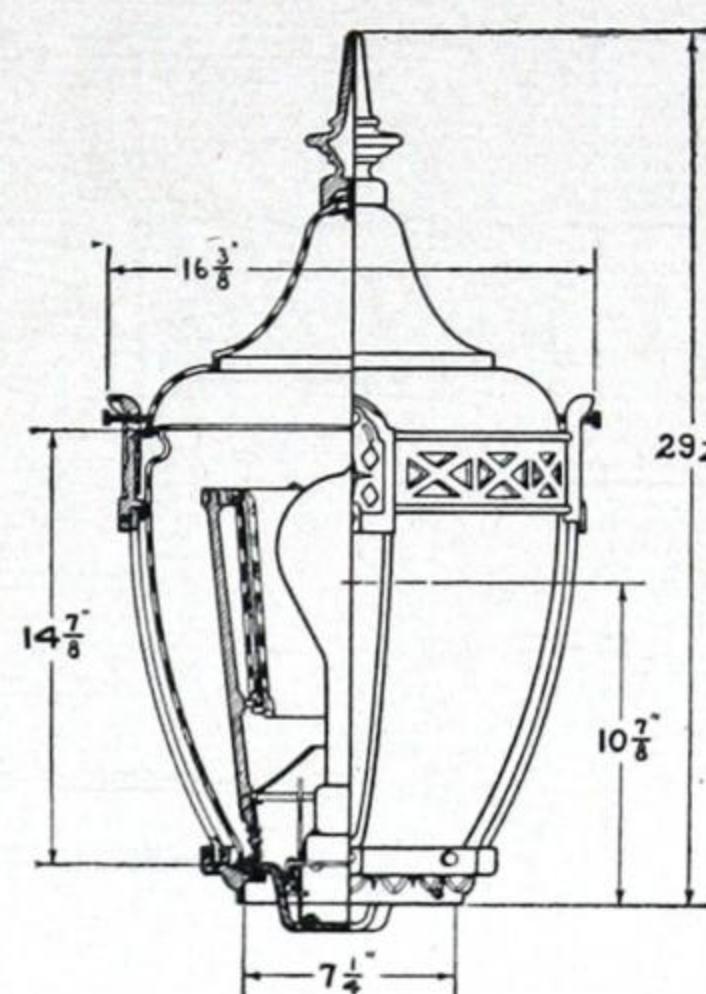
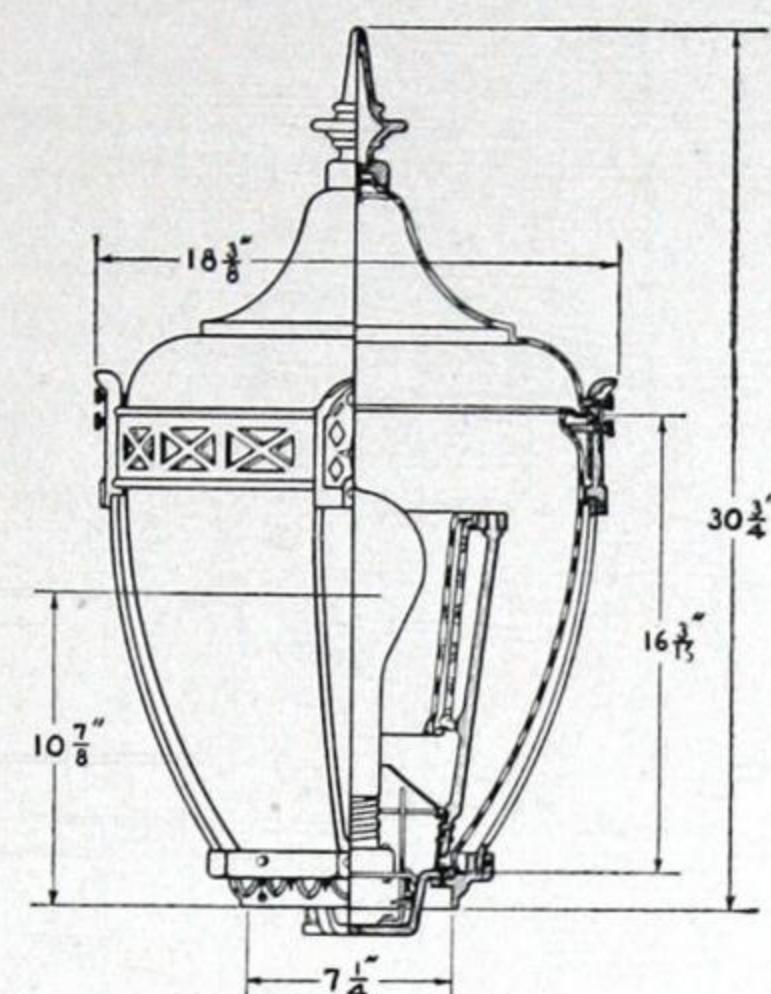
Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

## PARAGON LIGHTING UNITS



PARAGON SENIOR



PARAGON JUNIOR

The Paragon Lighting Unit is the latest development in all-glass street lighting units. The glassware consists of two parts, globe and canopy; each is made of clear rectilinear glass, light or dense alabaster rectilinear glass, or Monax glass.

The aluminum ornamental band and side supports add greatly to the attractiveness of the unit. When equipped with the Bi-lux Refractor, the Paragon is a remarkably efficient and attractive unit for street lighting purposes.

The Paragon Senior is recommended

for use on standards having a light center of 12-ft. or greater, and the Junior size is suitable for shorter standards. All Paragon units require Type A globe-holder fitters.

An adjustable socket-support permits accurate focusing of the lamp.

## LIST PRICES

## Description

Description	Ship. Wt. Style No.	List Lb. Ea.	Price
-------------	------------------------	-----------------	-------

## PARAGON SENIOR LIGHTING UNIT GLASS CANOPY

## Designed for Use with 300 to 1000-Watt Multiple Lamp and 4000, 6000 or 10,000-Lumen Series Type C Lamp\*

Complete with light alabaster globe and canopy, Standard film socket and Bi-lux refractor.....	352413	52	\$64 00
Complete with dense alabaster globe and canopy, Standard film socket but without refractor.....	352414	37	44 00
Complete with light alabaster globe and canopy, mogul multiple socket and Bi-lux refractor.....	352415	52	63 00
Complete with dense alabaster globe and canopy, mogul multiple socket but without refractor.....	352416	37	43 00
Complete with Monax globe and canopy and Standard film socket.....	352417	37	44 00
Complete with Monax globe and canopy and mogul multiple socket.....	352418	37	43 00

## PARAGON SENIOR LIGHTING UNIT METAL CANOPY

## Designed for Use with 300 to 1000-Watt Multiple Lamp and 4000, 6000 or 10,000-Lumen Series Type C Lamp\*

Complete with light alabaster globe, metal canopy, Standard film socket and Bi-lux refractor.....	352419	50	62 00
Complete with dense alabaster globe, metal canopy, Standard film socket but without refractor.....	352420	35	42 00
Complete with light alabaster globe, metal canopy, mogul multiple socket and Bi-lux refractor.....	352421	50	61 00
Complete with dense alabaster globe, metal canopy, mogul multiple socket but without refractor.....	352422	35	41 00
Complete with Monax globe, metal canopy and Standard film socket.....	352423	35	42 00
Complete with Monax globe, metal canopy and mogul multiple socket.....	352424	35	41 00

## PARAGON JUNIOR LIGHTING UNIT GLASS CANOPY

## Designed for Use with 500-Watt or Smaller Multiple Lamp and 10,000-Lumen or Smaller Series Type C Lamp\*

Complete with dense alabaster globe and canopy and Standard film socket.....	352425	32	39 00
Complete with dense alabaster globe and canopy and mogul multiple socket.....	352426	32	38 00
Complete with Monax globe and canopy and Standard film socket.....	352427	32	39 00
Complete with Monax globe and canopy and mogul multiple socket.....	352428	32	38 00

## PARAGON JUNIOR LIGHTING UNIT METAL CANOPY

## Designed for Use with 500-Watt or Smaller Multiple Lamp and 10,000-Lumen or Smaller Series Type C Lamp\*

Complete with dense alabaster globe, metal canopy and Standard film socket.....	352429	30	37 00
Complete with dense alabaster globe, metal canopy and mogul multiple socket.....	352430	30	36 00
Complete with Monax globe and canopy and Standard film socket.....	352431	30	37 00
Complete with Monax globe and canopy and mogul multiple socket.....	352432	30	36 00

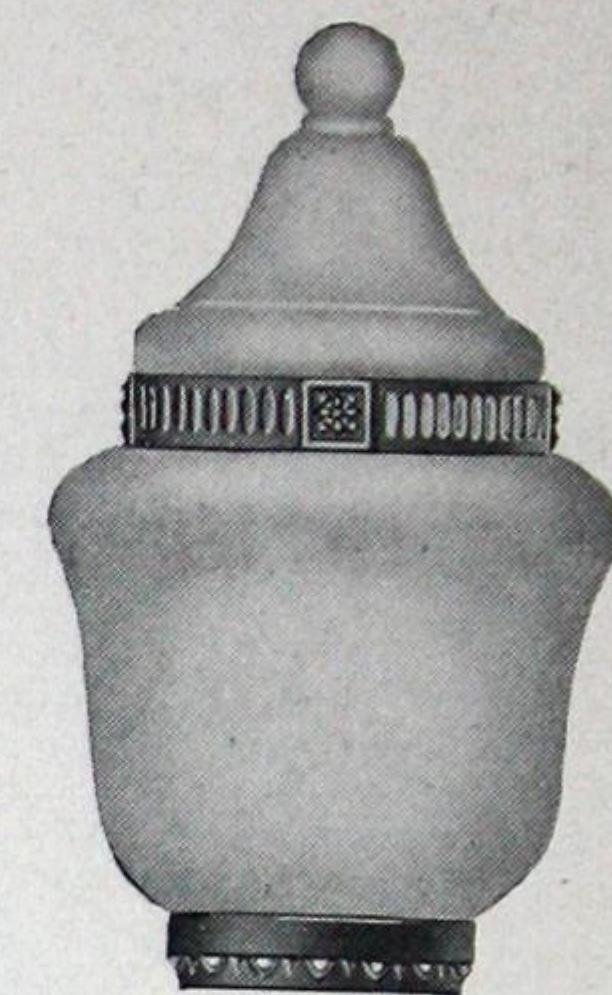
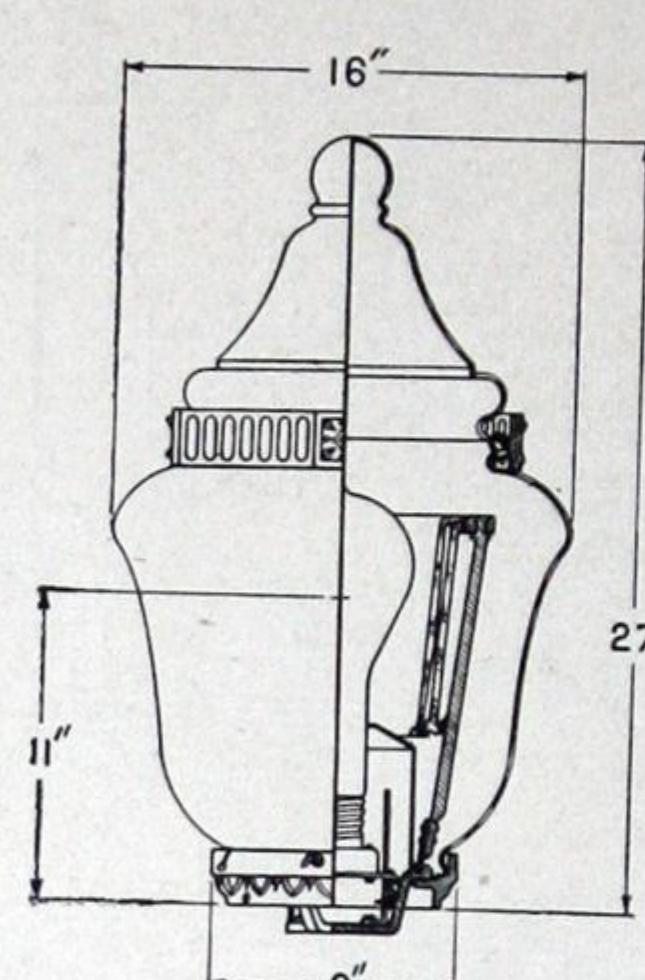
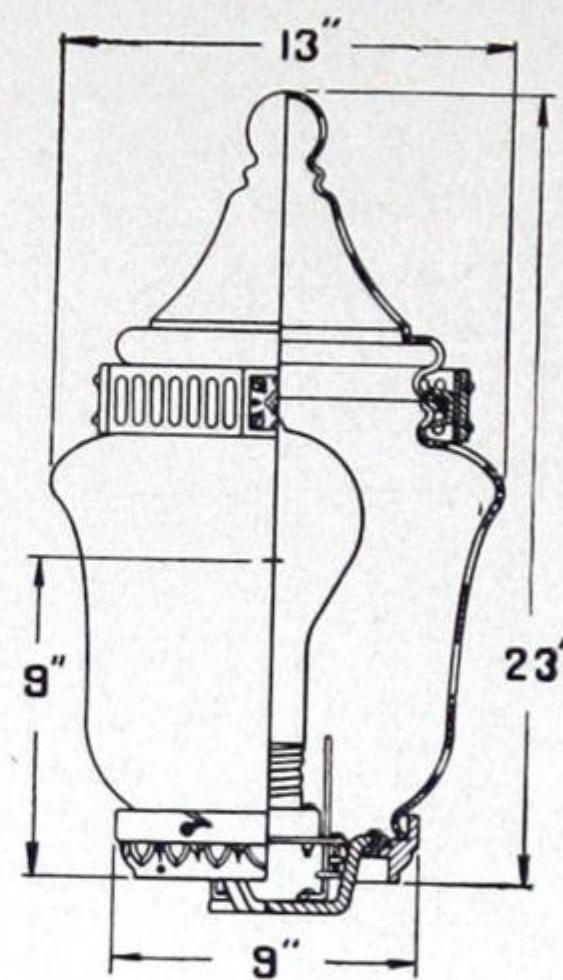
\*Prices do not include lamp.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

Order by Style Number

**SOL-LUX LIGHTING UNITS**

SOL-LUX JUNIOR



Sol-Lux Lighting Units are made in two sizes—Senior and Junior—so that a harmonious combination may be obtained. The Senior size is suited to large columns where the height to light center is 12 feet or more. The Junior size may

be used with any of the smaller columns where the height to light center is less than 12 feet. All Sol-Lux Lighting Units are used with Type A globe holder fitters, and include globes, filigree holding bands, canopies, disc insulators, sockets, socket

holders and globe rings. Plain holding bands will be furnished when ordered.

**Lighting Units do not include casings. When ordering casings, refer to Pages 864 and 865.**

**LIST PRICES**

## Description

Style No.	Ship. Wt. Lb.	Wt. Ea.	List Price
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**SOL-LUX SENIOR LIGHTING UNIT GLASS CANOPY****Designed for Use with 300 to 1000-Watt Multiple Lamps and 4000, 6000 or 10,000-Lumen Series Type C Lamps\***

Complete with light alabaster globe and canopy, Standard film socket and Bi-lux refractor.....	352308	52	\$45 00
Complete with dense alabaster globe and canopy, Standard film socket but without refractor.....	352309	37	25 00
Complete with light alabaster globe and canopy, mogul multiple socket and Bi-lux refractor.....	352310	52	44 00
Complete with dense alabaster globe and canopy, mogul multiple socket but without refractor.....	352311	37	24 00
Complete with Monax globe and canopy and Standard film socket.....	351277	37	25 00
Complete with Monax globe and canopy and mogul multiple socket.....	351278	37	24 00

**SOL-LUX SENIOR LIGHTING UNIT METAL CANOPY****Designed for Use with 300 to 1000-Watt Multiple Lamps and 4000, 6000 or 10,000-Lumen Series Type C Lamps\***

Complete with light alabaster globe, metal canopy, Standard film socket and Bi-lux refractor.....	352312	50	43 00
Complete with dense alabaster globe, metal canopy, Standard film socket but without refractor.....	352313	35	23 00
Complete with light alabaster globe, metal canopy, mogul multiple socket and Bi-lux refractor.....	352314	50	42 00
Complete with dense alabaster globe, metal canopy, mogul multiple socket but without refractor.....	352315	35	22 00
Complete with Monax globe, metal canopy and Standard film socket.....	351275	35	23 00
Complete with Monax globe, metal canopy and mogul multiple socket.....	351271	35	22 00

**SOL-LUX JUNIOR LIGHTING UNIT GLASS CANOPY****Designed for Use with 500-Watt or Smaller Multiple Lamps and 4000-Lumen or Smaller Series Type C Lamps\***

Complete with dense alabaster globe and canopy and Standard film socket.....	352316	32	19 00
Complete with dense alabaster globe and canopy and mogul multiple socket.....	352317	32	18 00
Complete with Monax globe and canopy and Standard film socket.....	351290	32	19 00
Complete with Monax globe and canopy and mogul multiple socket.....	351292	32	18 00

**SOL-LUX JUNIOR LIGHTING UNIT METAL CANOPY****Designed for Use with 500-Watt or Smaller Multiple Lamps and 4000-Lumen or Smaller Series Type C Lamps\***

Complete with dense alabaster globe, metal canopy and Standard film socket.....	352318	30	17 00
Complete with dense alabaster globe, metal canopy and mogul multiple socket.....	352319	30	16 00
Complete with Monax globe and canopy and Standard film socket.....	351283	30	17 00
Complete with Monax globe and canopy and mogul multiple socket.....	351285	30	16 00

\*Prices do not include lamp.

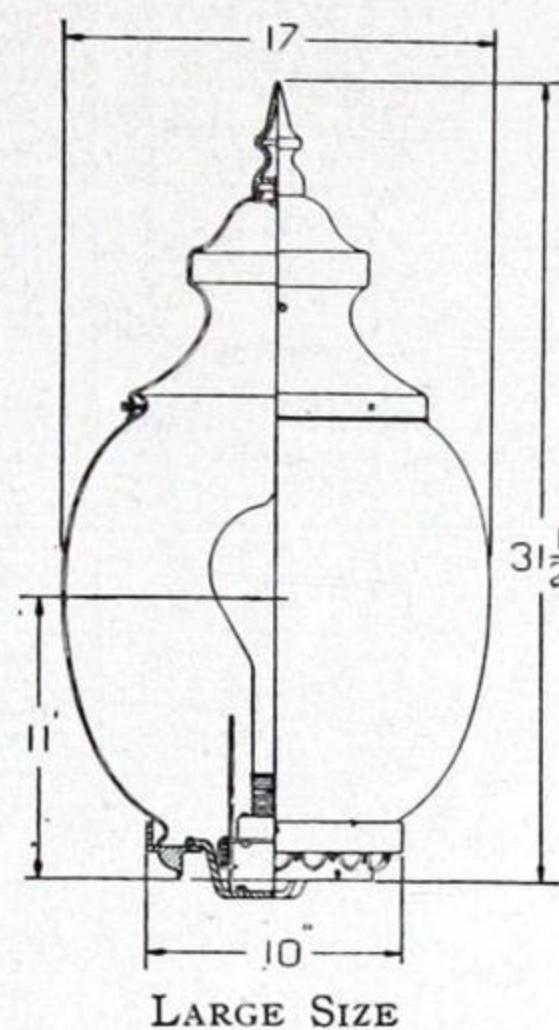
Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

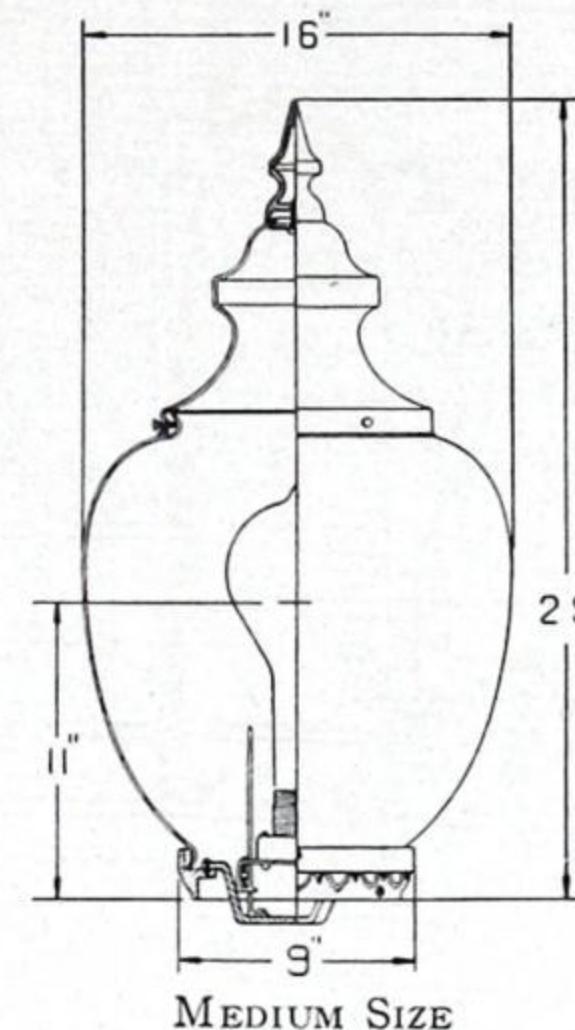
## WASHINGTON LIGHTING UNITS



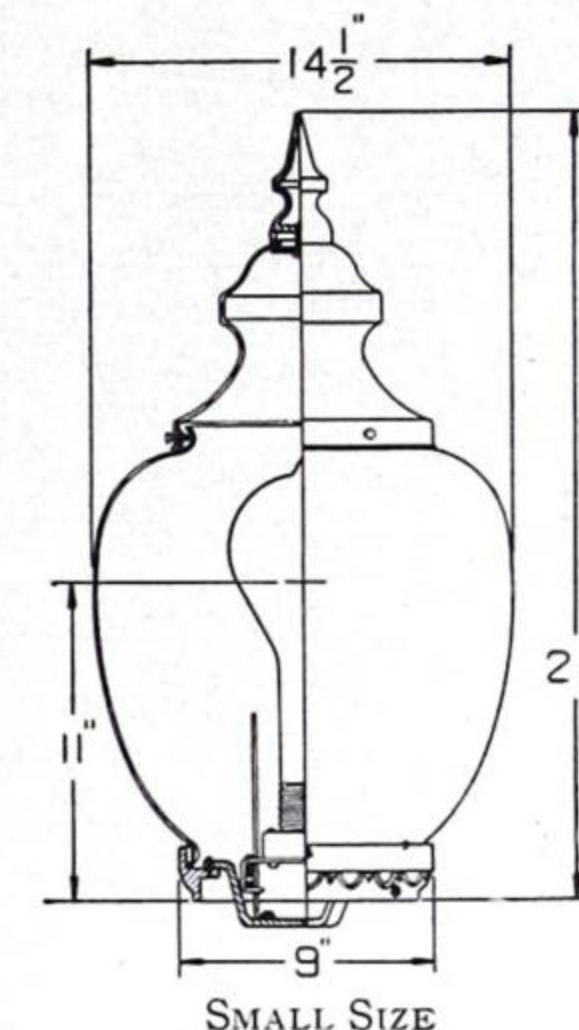
LARGE SIZE



LARGE SIZE



MEDIUM SIZE



SMALL SIZE

Washington Lighting Units can be used on either cast-iron or concrete standards or ornamental brackets when equipped with Type A fitters.

## LIST PRICES

Description	Style No.	Ship. Wt. Lb. Ea.	List Price
<b>LARGE SIZE</b>			
<b>Designed for Use with 1000 or 1500-Lumen Lamp*</b>			
Complete with mogul multiple socket.....	352395	37	\$33 00
Complete with Standard film socket.....	352396	37	34 00
<b>MEDIUM SIZE</b>			
<b>Designed for use with 4000 or 6000-Lumen Lamp*</b>			
Complete with mogul multiple socket.....	352397	36	26 00
Complete with Standard film socket.....	352398	36	27 00
<b>SMALL SIZE</b>			
<b>Designed for Use with 2500 or 4000-Lumen Lamp*</b>			
Complete with mogul multiple socket.....	352399	35	25 00
Complete with Standard film socket.....	352400	35	26 00

## GLASSWARE FOR WASHINGTON LIGHTING UNITS

Large canopy only.....	354121	12	7 30
Large globe, (9 3/8-inch fitter).....	354122	20	17 00
Medium canopy only.....	354119	12	5 50
Medium globe, (8-inch fitter).....	354120	20	12 00
Small canopy only.....	354117	12	5 20
Small globe, (8-inch fitter).....	354118	20	11 60

\*Prices do not include casings or lamps.

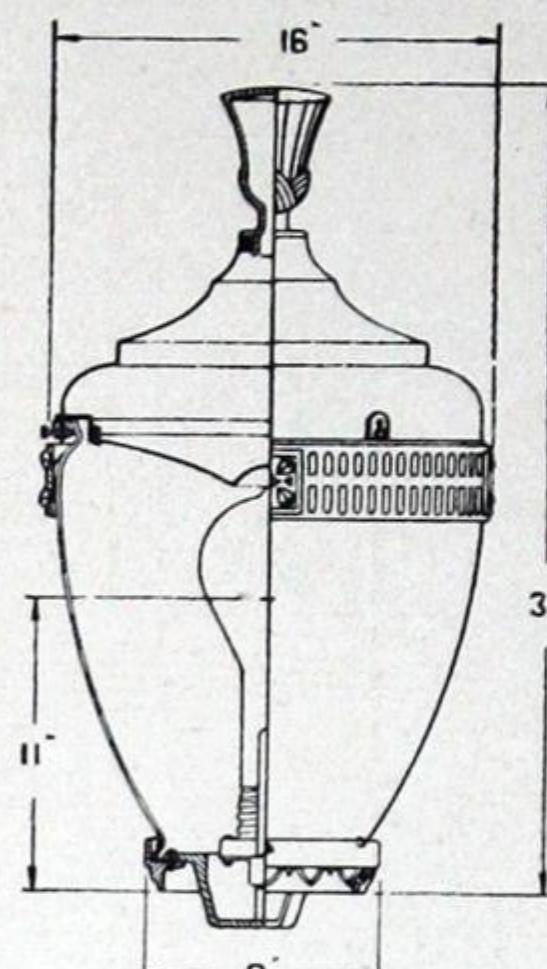
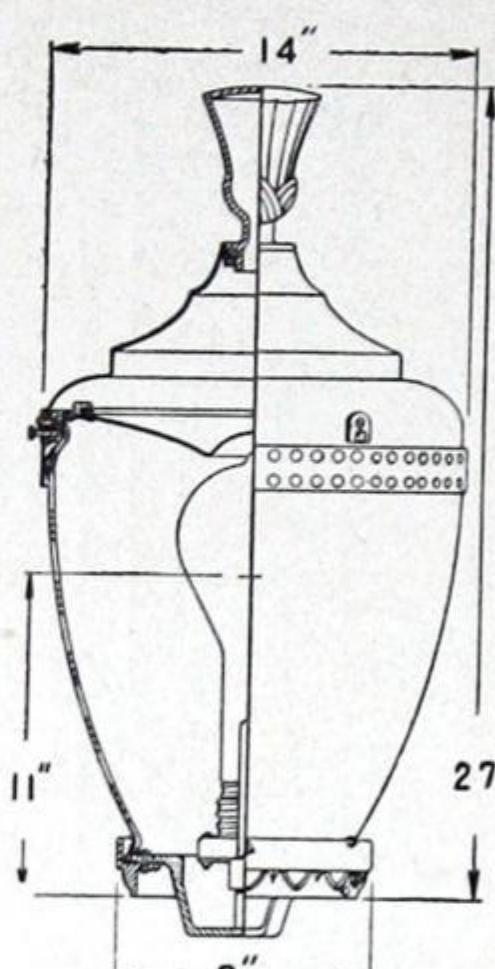
Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

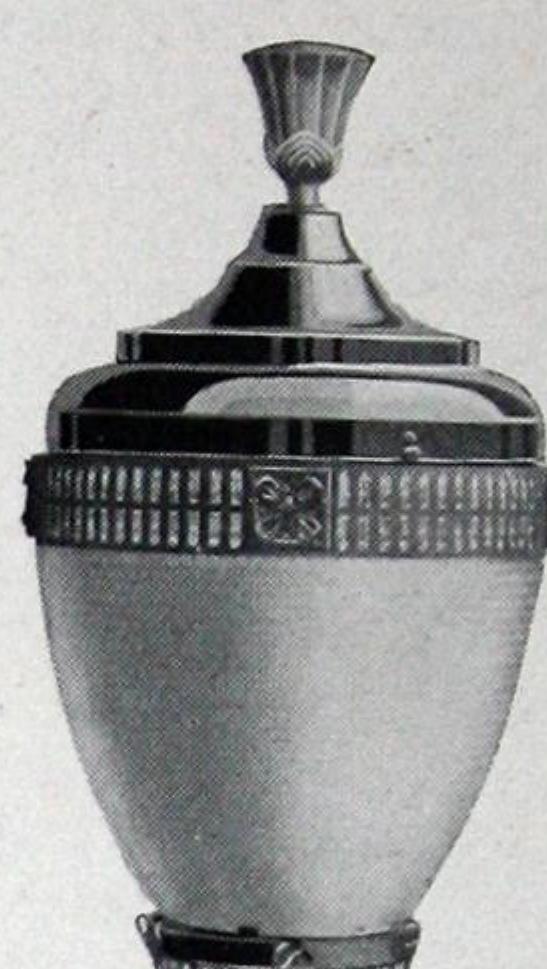
## EGYPTIAN LIGHTING UNITS



EGYPTIAN JUNIOR



EGYPTIAN SENIOR



Used with type A globe holder or post top fitter.

## LIST PRICES

## EGYPTIAN SENIOR LIGHTING UNIT

**Designed for Use with 300 to 1000-Watt Multiple Lamp and 4000, 6000 and 10000-Lumen Series Type C Lamp\***

Description	Ship. No.	Wt. Lb.	List Price
<b>EGYPTIAN SENIOR LIGHTING UNIT</b>			
Complete with light alabaster globe, Standard film socket and Bi-lux refractor . . . . .	352433	50	\$54 00
Complete with dense alabaster globe, Standard film socket but without refractor . . . . .	352434	35	34 00
Complete with light alabaster globe, mogul multiple socket and Bi-lux refractor . . . . .	352435	50	53 00
Complete with dense alabaster globe, mogul multiple socket but without refractor . . . . .	352436	35	33 00
Complete with Monax globe and Standard film socket . . . . .	352437	35	34 00
Complete with Monax globe and mogul multiple socket . . . . .	352438	35	33 00

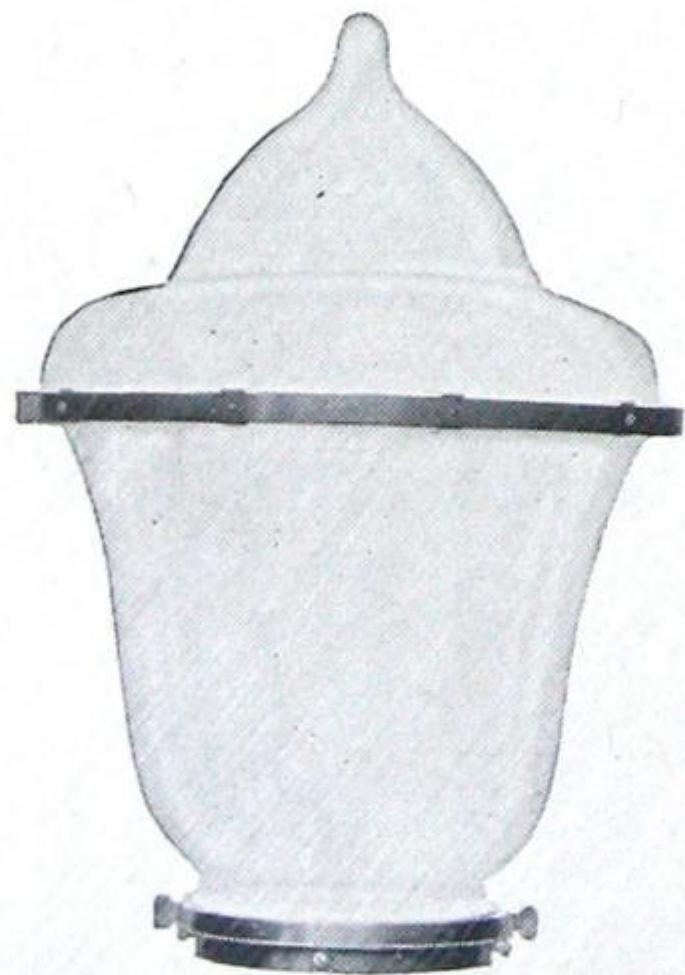
## EGYPTIAN JUNIOR LIGHTING UNIT

**Designed for Use with 500-Watt or Smaller Multiple Lamp or 4000-Lumen or Smaller Series Lamp\***

Complete with dense alabaster globe and Standard film socket . . . . .	352439	30	28 00
Complete with dense alabaster globe and Mogul multiple socket . . . . .	352440	30	27 00
Complete with Monax globe and Standard film socket . . . . .	352441	30	28 00
Complete with Monax globe and Mogul multiple socket . . . . .	352442	30	27 00

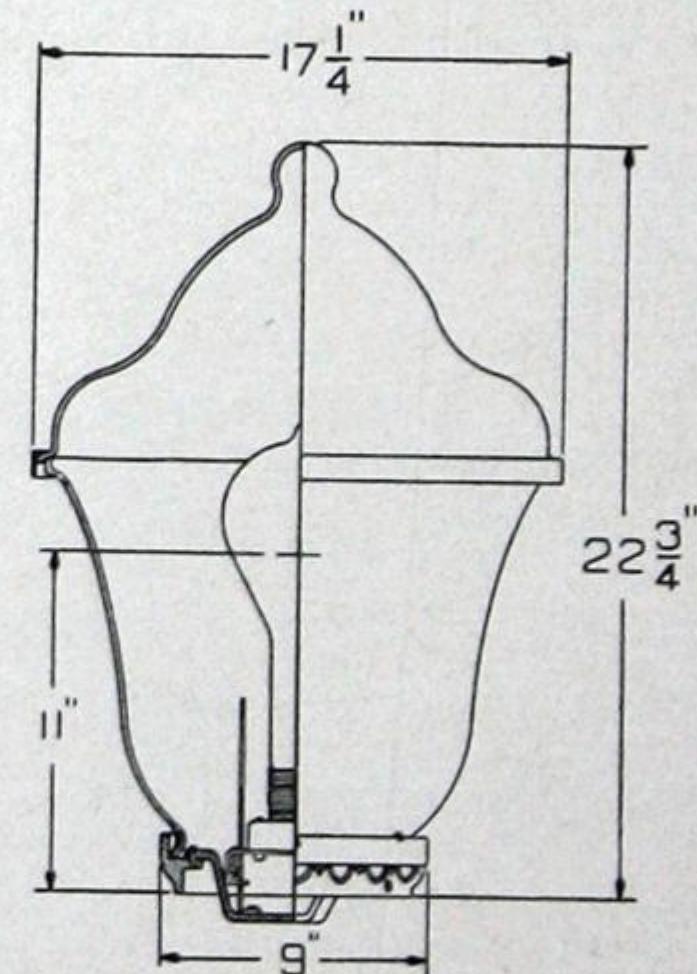
\*Prices do not include lamp.

## CINCINNATI LIGHTING UNITS



The Cincinnati Lighting Unit consists of a specially designed globe and canopy, both of Monax diffusing glass, which is assembled so as to form one unit by means of an ornamental metal band. The shape of the canopy is such that it forms a watershed allowing rain to drip from it instead of running down the globe as in other types. The method of assembling the globe and canopy with an ornamental band eliminates the disagreeable shadows which are cast on the globe when internal methods of attaching are used. The Cincinnati Unit may be attached to the casing by means of a Jiffy Globeholder, which facilitates the removal of the unit for relamping and cleaning.

Prices do not include casing.



## LIST PRICES

For casings with 8-inch fitter complete with mogul multiple socket . . . . .	Style No.	Ship. Wt., Lb., Ea.	List Price
For casings with 8-inch fitter complete with Standard film socket . . . . .	352409	25	\$27 00
For casings with 9 3/8-inch fitter complete with mogul multiple socket . . . . .	352410	25	28 00
For casings with 9 3/8-inch fitter complete with Standard film socket . . . . .	352411	25	27 00

For casings with 9 3/8-inch fitter complete with Standard film socket . . . . .	352412	25	28 00
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Dimensions are for reference only. For official dimensions apply to the nearest district office.

Order by Style Number

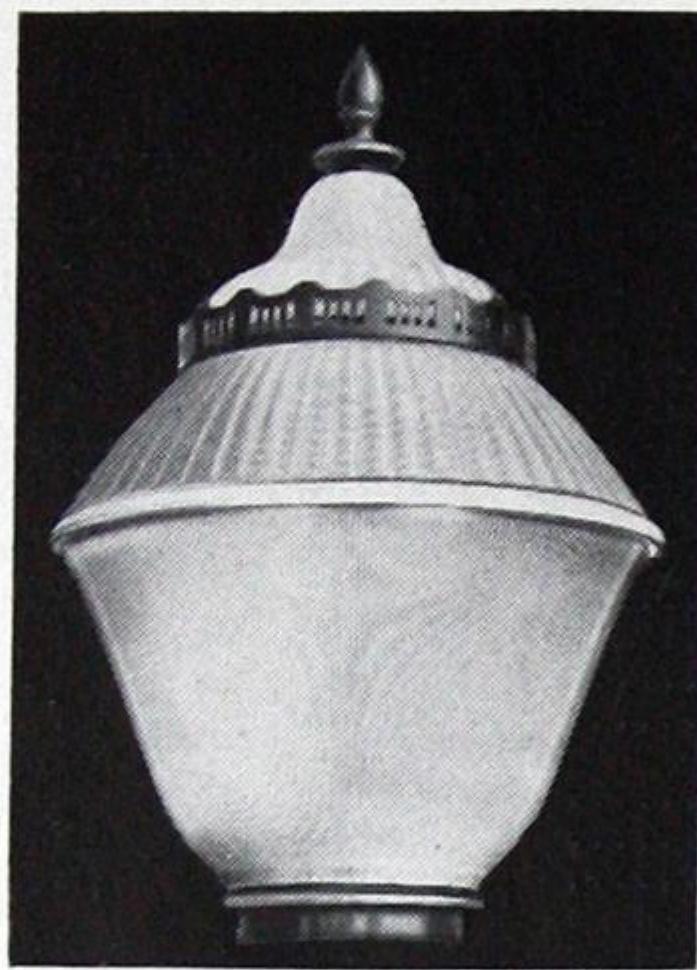
## LIGHTING UNIT PARTS

For prices and descriptions of glassware see pages 904 to 911.

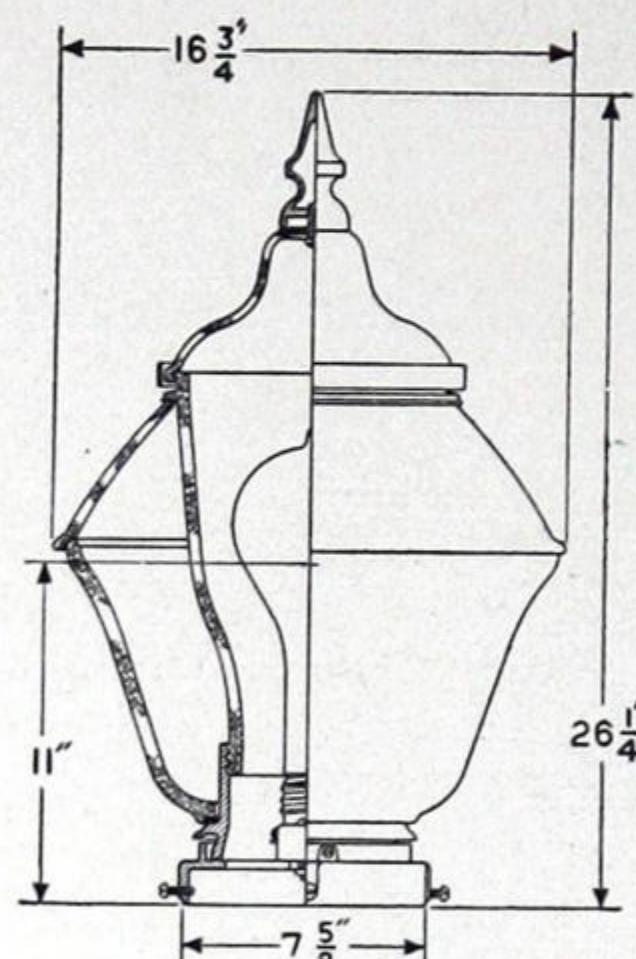
### LIST PRICES

Description	Style No.	Ship. Wt. Lb. Ea.	List Price
<b>HOLDING BANDS</b>			
Plain holding band for Sol-Lux Senior unit.....	336523	2	\$ 1 00
Filigree holding band for Sol-Lux Senior unit.....	354083	2	2 00
Plain holding band for Sol-Lux Junior unit.....	336522	2	1 00
Filigree holding band for Sol-Lux Junior unit.....	353999	2	2 00
Egyptian Senior band.....	352884	2	5 25
Paragon Senior metal parts, complete.....	351697	10	21 00
Paragon Junior metal parts, complete.....	351698	8	19 50
Plain holding band for Cincinnati unit.....	351582	2	2 00
Holding ring for Small Washington unit.....	354152	2	2 00
Holding ring for Medium Washington unit.....	354153	2	2 00
Holding ring for Large Washington unit.....	354154	2	2 00
<b>REFLECTORS</b>			
Upper reflector for Octagonal Senior unit.....	354071	6	4 50
Upper reflector for Octagonal Junior unit.....	354054	6	3 40
Upper reflector for Egyptian Senior unit.....	354054	6	3 40
Upper reflector for Egyptian Junior unit.....	354085	4	2 65
Lower reflector for Paragon or Sol-Lux units.....	354078	2	3 50
<b>REFRACTOR HOLDERS</b>			
Refractor holder for Paragon, Sol-Lux Senior or Egyptian Senior unit.....	351696	2	4 00
Refractor holder for Octagonal Senior unit.....	353900	2	3 00
Refractor holder for Octagonal Junior unit.....	354035	2	3 00
<b>METAL CANOPIES</b>			
Sol-Lux Senior metal canopy, porcel in enameled .....	336151	10	5 95
Sol-Lux Senior metal canopy, aluminum.....	354102	6	5 95
Sol-Lux Junior metal canopy, porcel in enameled .....	336149	8	5 35
Sol-Lux Junior metal canopy, aluminum.....	354173	5	5 35
Egyptian Senior metal canopy.....	353204	10	11 80
Egyptian Junior metal canopy.....	353260	10	10 60
<b>FINIALS</b>			
Spike Ornament for Octagonal Junior unit.....	354108	3	2 50
Spear Ornament for Octagonal Junior unit.....	352802	3	2 50
Acorn Ornament for Octagonal Junior unit.....	350091	3	2 50
Spike Ornament for Octagonal Senior unit.....	354044	3	3 00
Finial for Paragon unit.....	351531	3	2 50
Finial for Washington unit.....	354164	3	2 00
<b>SOCKETS</b>			
Mogul skeleton socket.....	336179	1	95
Compensator socket.....	336040	3	1 95
1000-lumen reactance unit.....	335970	7	12 95
2500-lumen reactance unit.....	335971	10	13 95
4000-lumen auto-transformer unit.....	335627	11	10 95
6000-lumen auto-transformer unit.....	335628	12	12 45
10000-lumen auto-transformer unit.....	335629	16	15 95
Disc receptacle for Standard film socket.....	345896	4	1 95
<b>MISCELLANEOUS PARTS</b>			
Block insulator.....	336110	1	3 5
Disc insulator.....	336187	3	1 00
Globe protecting ring.....	353800	1	20
Gauge for refractor holders.....	351485	1	1 00
Sol-Lux globe ring only.....	354140	5	2 00
Sol-Lux globe ring with adjustable socket support.....	354067	7	4 00

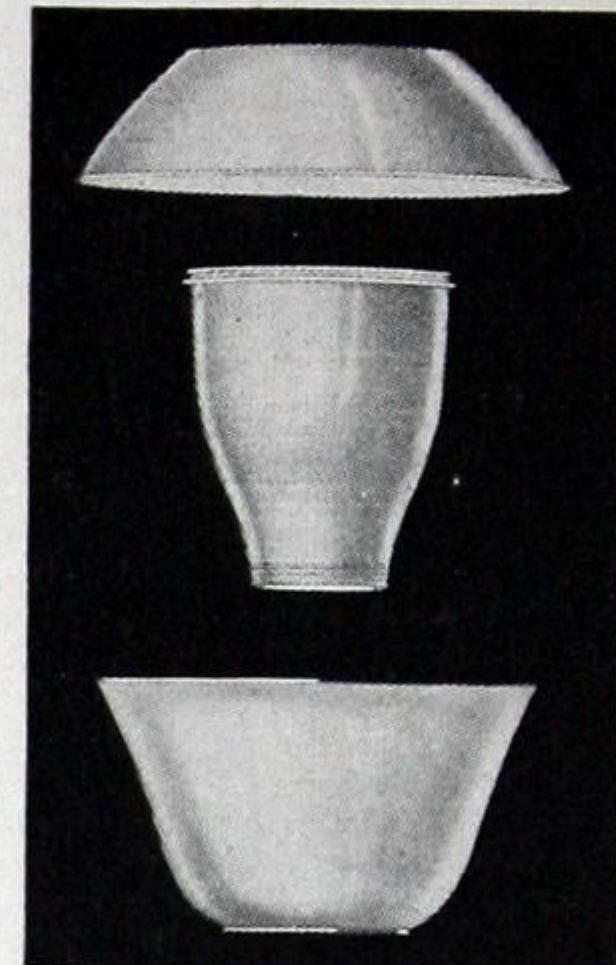
*Order by Style Number*

**HOLOPHANE ORNAMENTAL REFRACTORS**

HOLOPHANE ORNAMENTAL REFRACTOR



REFRACTOR AND HOLDER-RING



REFRACTOR DISSEMBLED

The Holophane ornamental refractor redirects practically all of the upward light and is therefore well adapted for use on boulevards, parkways and in residential districts where upward light is a total loss and often annoying to residents along the street. The refractor is made in three pieces. The inner piece has refracting prisms on its outer surface and the upper outer piece has similar prisms on its inner surface. These deflect the light in the proper downward direction.

The outer bottom piece has diffusing prisms on its inner surface. The assembled unit is locked together by a metal nut at the bottom engaging with glass threads on the inner element and bearing against a flange on the outside lower piece. All exposed surfaces are smooth, which reduces dirt accumulation to a minimum and makes cleaning easy. The double set of Holophane refracting prisms effectively conserves the light by deflecting it into useful directions and

the diffusing prisms give the bowl a beautiful luminous appearance.

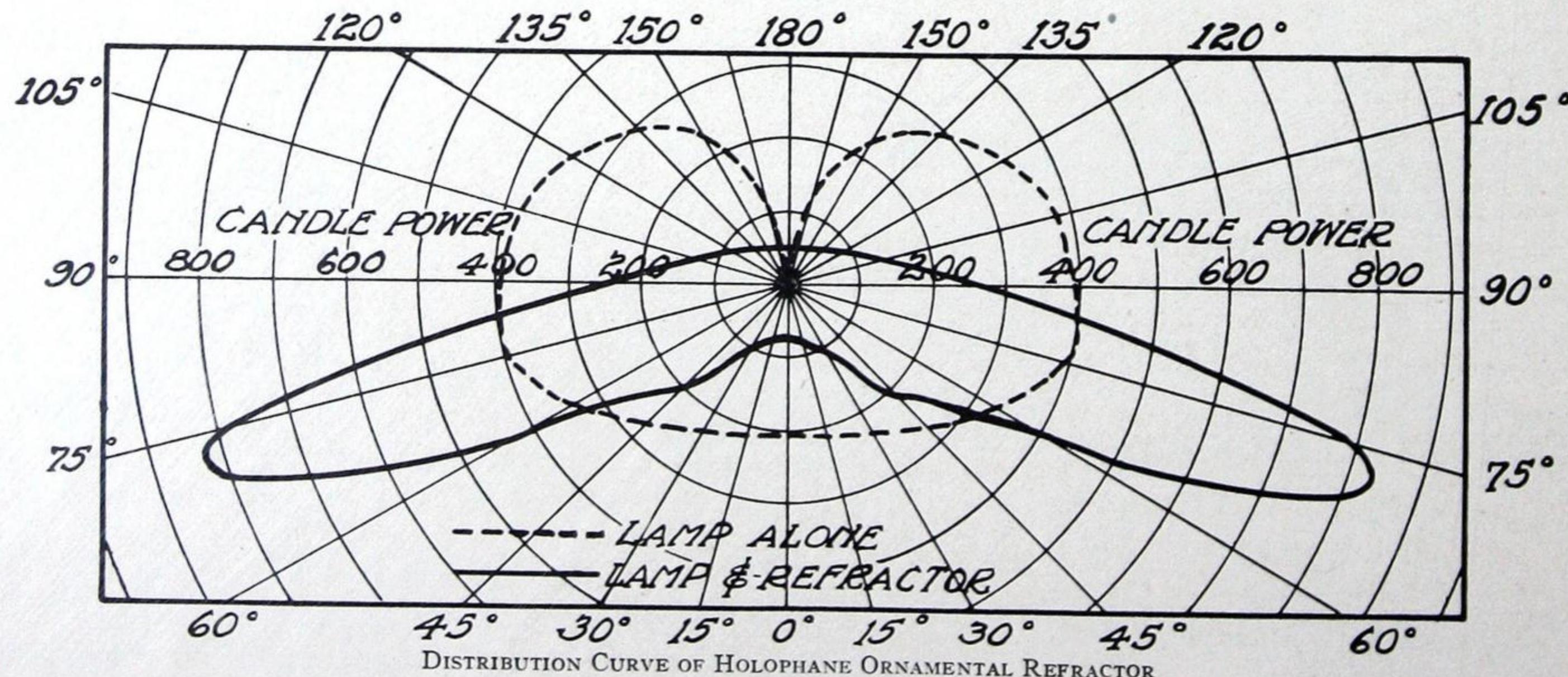
This Holophane ornamental refractor is especially adapted to the modern practice of high mounting. By raising or lowering the lamp the angle of maximum candlepower can be varied between 65 to 80 degrees to conform to all practical ratios between spacing and mounting heights.

The ornamental refractor with holder ring can be used on any casing with Type A Fitter.

**LIST PRICES**

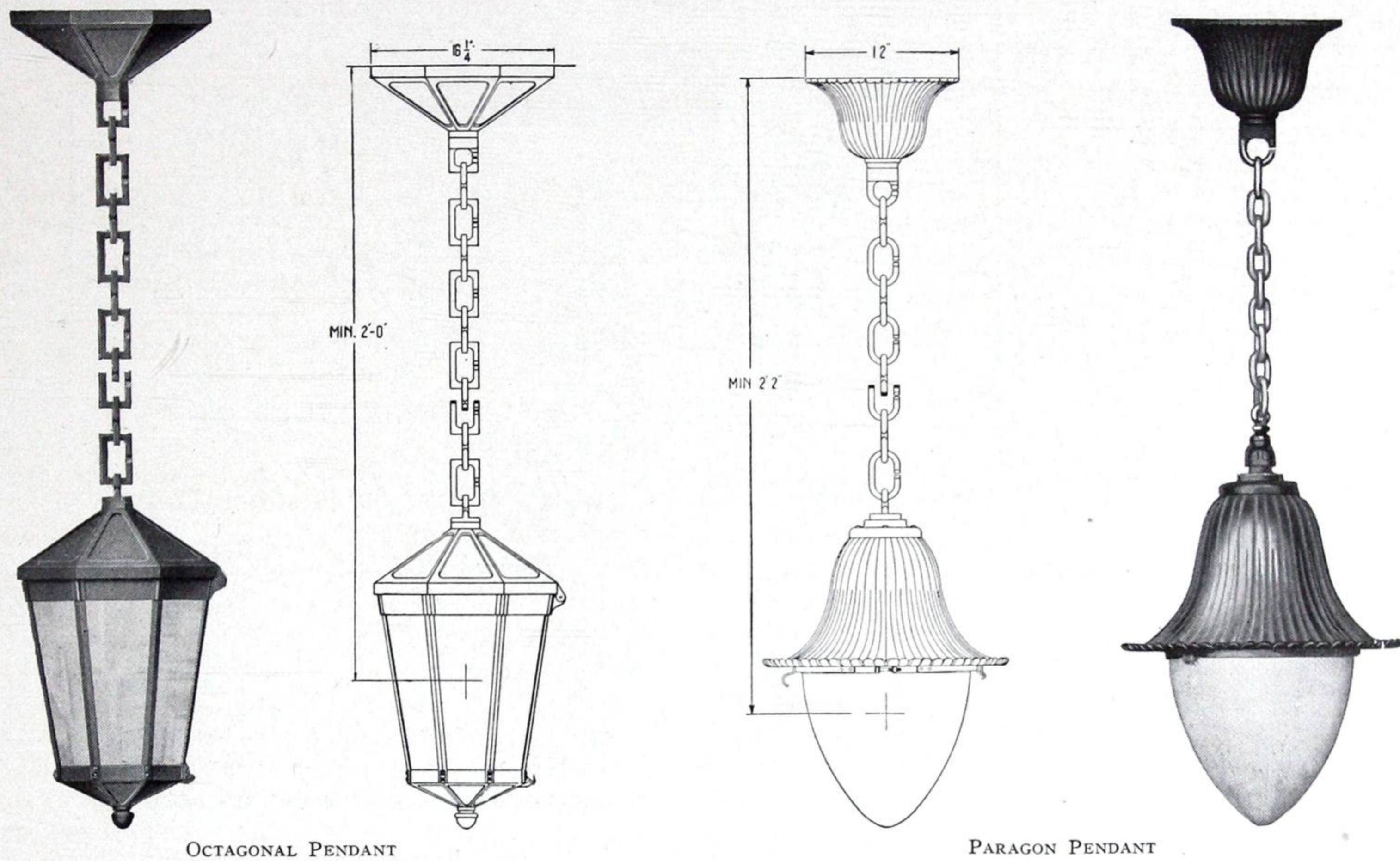
Description  
Refractor lighting unit with holder ring, ornamental glass canopy, porcelain disc insulator and Standard film socket for 2500, 4000 and 6000 lumen 6.6-amp. series lamps.....  
Same, except with mogul socket for 300 and 500-watt multiple lamps .....

Description	Style No.	Ship. Wt. Lb. Ea.	List Price
Refractor lighting unit with holder ring, ornamental glass canopy, porcelain disc insulator and Standard film socket for 2500, 4000 and 6000 lumen 6.6-amp. series lamps.....	352401	105	\$70 00
Same, except with mogul socket for 300 and 500-watt multiple lamps .....	352402	104	69 00



Order by Style Number

## PARAGON AND OCTAGONAL PENDANTS



For lighting porticos, porte-cochères or similar structures, ornamental pendants suspended by a chain is often most desirable. In buildings of this character, as well as public markets, railway concourses and similar semi-public places, lighting standards would be in the way; under these conditions pendant units are recommended.

### The Paragon Pendant

**Description**—The Paragon Pendant consists of an ornamental cast-iron canopy with a  $1\frac{1}{4}$ -inch female pipe thread at the top and is designed for either bracket or chain suspension. It is provided with an adjustable socket support and is suitable for use with multiple lamps or with street series lamps operated from a safety coil. The globe band is similar in construction to that used on Luxsolite pendants, and firmly seats the globe on a felt gasket thus making the unit dust- and bug-proof. A parabolic reflector which increases the illumination

in the useful plane is included with the unit.

**Application**—If desired the Paragon Pendant may be supplied with an aluminum canopy and cable clamp for center suspension in small towns and villages where the cost of an underground system would be prohibitive. This arrangement provides an economical method of installing an ornamental street lighting system with overhead construction. The Paragon Pendant is supplied with clear or flashed opalescent rectilinear or Monax glass globes.

### The Octagonal Pendant

**Description**—The Octagonal Pendant is furnished in two sizes, Senior and Junior. It consists of a cast-iron canopy with  $1\frac{1}{4}$ -inch female pipe thread at the top and is designed for either bracket or chain suspension. It is provided with an adjustable socket support and is suitable for use with multiple lamps or with street series lamps, when operated from a safety coil. The ribs are of cast-iron and are

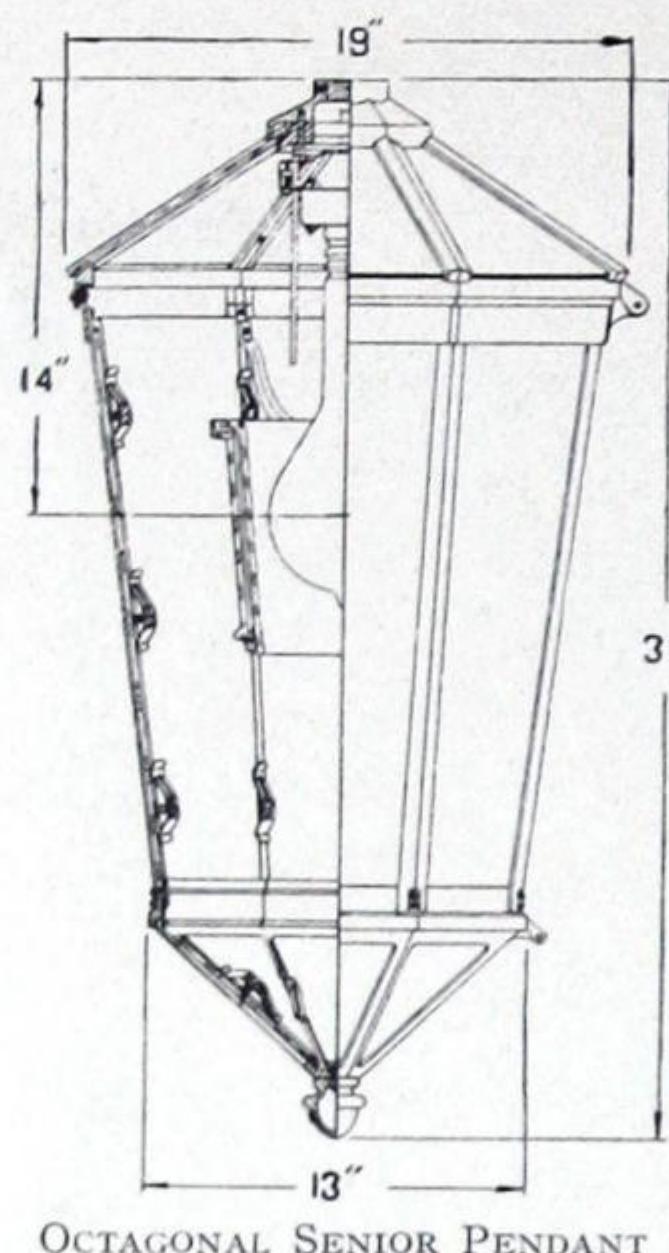
provided with felt gaskets on which the glass panels are seated, thus making the unit dust- and bug-proof. The bottom fitter is of cast aluminum and is hinged to facilitate cleaning and re-lamping. The standard glassware used for the panels is Syenite glass but other commercial glass panels such as cathedral, ribbed, Florentine and Factrolite will be supplied if desired. Specially designed spring clips hold the panels firmly in place and provide a simple method of replacing them if broken.

Either of the above units may be equipped with Bi-lux refractors if desired.

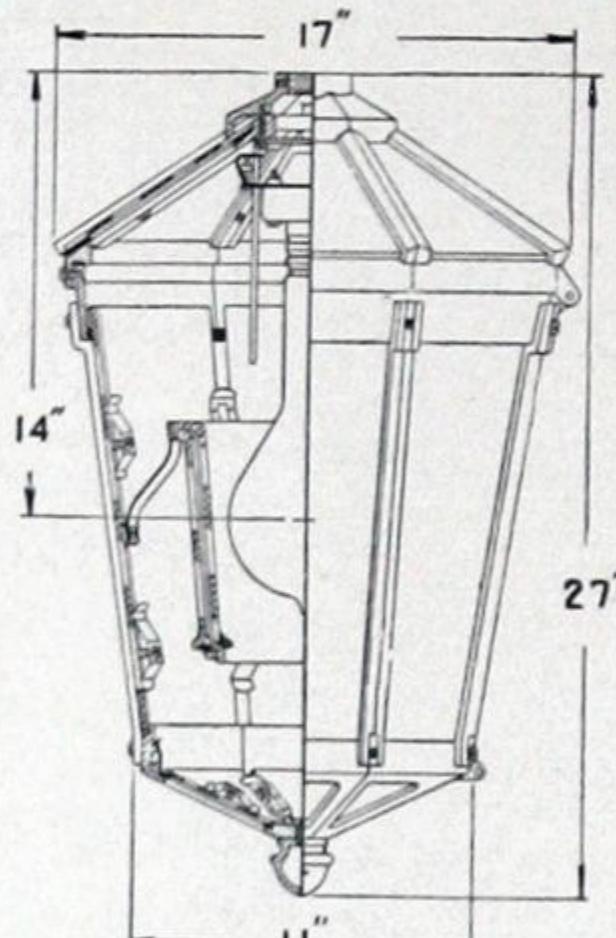
### Canopies and Chains

When it is desired to suspend these units from the ceiling a suitable chain assembly consisting of ceiling plate, stem, two loops and thirty inches of chain, is provided. The chain is of cast iron and consists of quickly detachable links so that the unit may be easily adjusted to a suitable height.

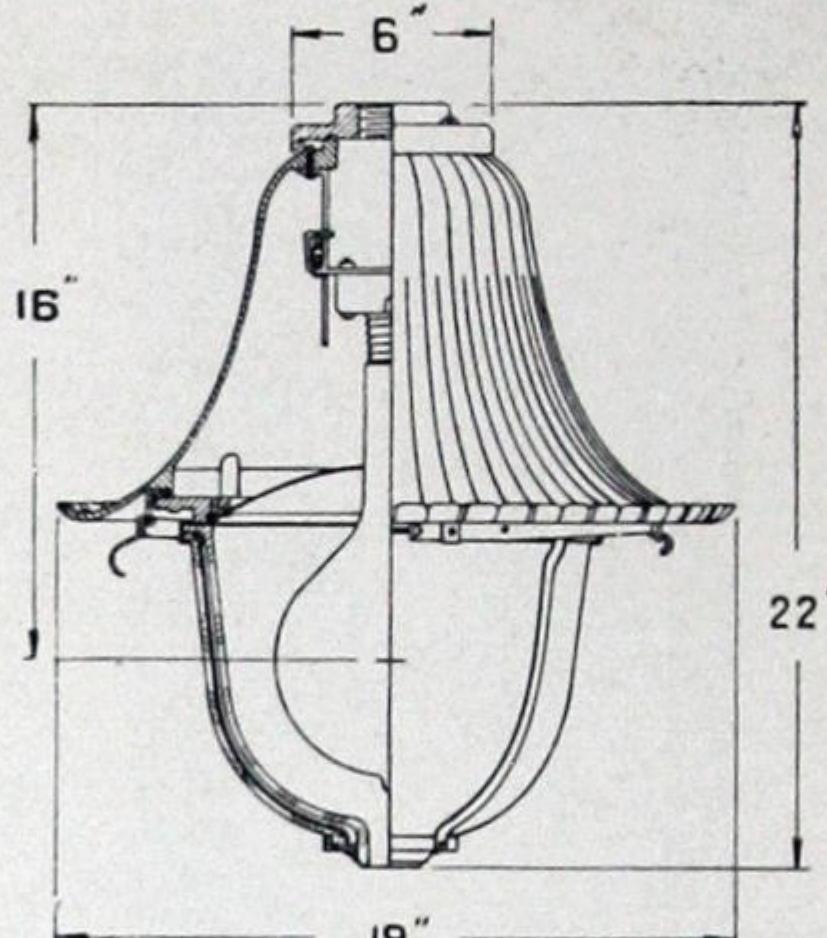
## PARAGON AND OCTAGONAL PENDANTS—Continued



OCTAGONAL SENIOR PENDANT



OCTAGONAL JUNIOR PENDANT



PARAGON PENDANT

Style numbers and list prices of pendants do not include ceiling canopy or suspension chain. These items should be ordered separately.

## LIST PRICES

Description	Ship. Wt. Lb., Each	Style No.	List Price
<b>PARAGON PENDANTS</b>			
<b>Designed for use with 500-watt or smaller multiple lamps and 4000-lumen or smaller Type C series lamps*</b>			
Paragon Pendant, clear rectilinear globe and medium multiple socket.....	150	351688	\$76 15
Paragon Pendant, clear rectilinear globe and mogul multiple socket.....	150	351687	76 25
Paragon Pendant, clear rectilinear globe standard film socket.....	150	351689	77 25
Paragon Pendant, flashed opalescent rectilinear globe and medium multiple socket.....	150	351691	77 30
Paragon Pendant, flashed opalescent rectilinear globe and mogul multiple socket.....	150	351690	77 40
Paragon Pendant, flashed opalescent rectilinear globe standard film socket.....	150	351692	78 40
Paragon Pendant, Monax globe and medium multiple socket.....	150	351694	77 30
Paragon Pendant, Monax globe and mogul multiple socket.....	150	351693	77 40
Paragon Pendant, Monax globe standard film socket.....	150	351695	78 40

## OCTAGONAL JUNIOR PENDANTS

Designed for use with 500-watt or smaller multiple lamps and 4000-lumen or smaller Type C series lamps\*

Octagonal Jr. Pendant, with standard film socket.....	80	351331	45 00
Octagonal Jr. Pendant, with medium socket for 200-watt multiple lamps.....	80	351332	43 90
Octagonal Jr. Pendant, with mogul socket for 300 and 500-watt multiple lamps.....	80	351333	44 00
Octagonal Jr. Pendant, with mogul socket for 750 and 1000-watt multiple lamps and 15 or 20-ampere series lamps.....	80	351334	44 00

## OCTAGONAL SENIOR PENDANTS

Designed for use with 300 to 1000-watt multiple lamps and 4000, 6000 or 10,000-lumen series Type C lamps\*

Octagonal Sr. Pendant, with standard film socket.....	145	351317	82 00
Octagonal Sr. Pendant, with mogul socket for 300 and 500-watt multiple lamps.....	145	351318	81 00
Octagonal Sr. Pendant, with mogul socket for 750 and 1000-watt multiple lamps and 15 or 20-ampere series lamps†.....	145	351319	81 00

## CANOPIES AND CHAINS

## For Paragon Pendants

Complete assembly consisting of ceiling plate, stem, canopy, loops and 30 inches of chain.....	40	351590	38 50
Extra chain, per link.....	2	351593	2 00

## For Octagonal Junior and Senior Pendants

Complete assembly consisting of ceiling plate, stem, canopy, loops and 30 inches of chain.....	45	351589	38 50
Extra chain, per link.....	2	351594	2 00

\*Prices do not include lamps.

†When used with safety coils or other external transformers.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

*Order by Style Number*

## HAZARD UNDERGROUND CABLE



Modern practice in the installation of ornamental street lighting systems favors the use of steel-armored cable buried in a shallow trench for the carrying of current to the lighting units.

The steel-armored cable consists of a copper conductor insulated with rubber, over which is a braided cover. Next there

is a layer of tape, which is enclosed in a continuous lead sheath. A wrapping of steel tape, so arranged as to insure ample overlapping when the cable is bent, prevents injury to the lead sheath. An outer serving of jute affords protection to the steel tape when placed in the ground. If properly installed, the life of

this cable is almost indefinite, as the lead cover forms an efficient protection from water, while the steel armor protects the cable from mechanical injury. Where mechanical protection is not essential, lead covered cable, not encased in steel may be used.

## LEAD ENCASED, STEEL TAPE CABLE

Size B&S Gauge	Rubber Wall Inches	Lead Wall Inches	Thickness Steel Tape Inches	Working Voltage	Standard Lengths Feet	Approximate Outside Dia. Inches	Dia. Reel Inches	Shipping Wt., Lb. per 1000 Feet	List Price per 1000 Feet
<b>SINGLE-CONDUCTOR CABLE</b>									
10	$\frac{3}{8}$	$\frac{3}{16}$	.020	600	2000	.61	38	636	
10	$\frac{3}{8}$	$\frac{3}{16}$	.030	600	2000	.65	38	768	
10	$\frac{3}{8}$	$\frac{1}{16}$	.020	2500	2000	.74	44	974	
10	$\frac{3}{8}$	$\frac{1}{16}$	.030	2500	2000	.78	44	1136	
10	$\frac{1}{8}$	$\frac{1}{16}$	.020	3500	2000	.80	46	1122	
10	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	2000	.84	46	1295	
10	$\frac{5}{32}$	$\frac{1}{16}$	.020	5000	1500	.86	44	1225	
10	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.90	44	1420	
10	$\frac{6}{32}$	$\frac{1}{16}$	.020	6000	1500	.93	48	1435	
10	$\frac{6}{32}$	$\frac{1}{16}$	.030	6000	1500	.97	48	1639	
8	$\frac{3}{16}$	$\frac{3}{16}$	.020	600	2500	.64	42	710	
8	$\frac{3}{16}$	$\frac{3}{16}$	.030	600	2500	.68	42	847	
8	$\frac{3}{16}$	$\frac{1}{16}$	.020	2500	2500	.77	46	1060	
8	$\frac{3}{16}$	$\frac{1}{16}$	.030	2500	2500	.81	46	1230	
8	$\frac{1}{8}$	$\frac{1}{16}$	.020	3500	2000	.83	46	1200	
8	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	2000	.87	46	1390	
8	$\frac{5}{32}$	$\frac{1}{16}$	.020	5000	1500	.89	46	1277	
8	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.93	46	1477	
8	$\frac{6}{32}$	$\frac{1}{16}$	.020	6000	1500	.95	48	1529	
8	$\frac{6}{32}$	$\frac{1}{16}$	.030	6000	1500	.99	48	1737	
6	$\frac{1}{16}$	$\frac{1}{16}$	.020	600	2500	.74	46	1020	
6	$\frac{1}{16}$	$\frac{1}{16}$	.030	600	2500	.78	46	1175	
6	$\frac{3}{16}$	$\frac{1}{16}$	.020	2500	2000	.80	46	1200	
6	$\frac{3}{16}$	$\frac{1}{16}$	.030	2500	2000	.84	46	1375	
6	$\frac{1}{8}$	$\frac{1}{16}$	.020	3500	2000	.86	48	1320	
6	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	2000	.90	48	1500	
6	$\frac{5}{32}$	$\frac{1}{16}$	.020	5000	1500	.92	48	1480	
6	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.96	48	1680	
6	$\frac{6}{32}$	$\frac{1}{16}$	.020	6000	1500	.99	48	1642	
6	$\frac{6}{32}$	$\frac{1}{16}$	.030	6000	1500	1.03	48	1860	
<b>TWO-CONDUCTOR CABLE</b>									
10	$\frac{3}{8}$	$\frac{3}{16}$	.020	600	2000	.83	46	1007	
10	$\frac{3}{8}$	$\frac{3}{16}$	.030	600	2000	.87	46	1192	
10	$\frac{3}{16}$	$\frac{1}{16}$	.020	2500	2000	.74x1.07	48	1649	
10	$\frac{3}{16}$	$\frac{1}{16}$	.030	2500	2000	.78x1.11	48	1907	
10	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	1500	.84x1.24	48	2184	
10	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.90x1.36	52	2465	
10	$\frac{6}{32}$	$\frac{1}{16}$	.030	6000	1000	.97x1.49	54	2762	
8	$\frac{3}{16}$	$\frac{3}{16}$	.020	600	2500	.88	50	1240	
8	$\frac{3}{16}$	$\frac{3}{16}$	.030	600	2500	.92	50	1420	
8	$\frac{3}{16}$	$\frac{1}{16}$	.020	2500	2000	.77x1.13	50	1780	
8	$\frac{3}{16}$	$\frac{1}{16}$	.030	2500	2000	.81x1.17	50	2050	
8	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	1500	.87x1.29	50	2320	
8	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.93x1.42	52	2628	
8	$\frac{6}{32}$	$\frac{5}{16}$	.030	6000	1000	1.02x1.57	54	3317	
6	$\frac{1}{16}$	$\frac{1}{16}$	.030	600	2000	.78x1.11	50	2000	
6	$\frac{3}{16}$	$\frac{1}{16}$	.030	2500	2000	.84x1.23	52	2280	
6	$\frac{1}{8}$	$\frac{1}{16}$	.030	3500	1500	.90x1.36	50	2540	
6	$\frac{5}{32}$	$\frac{1}{16}$	.030	5000	1500	.96x1.48	54	2850	
6	$\frac{6}{32}$	$\frac{5}{16}$	.030	6000	1000	1.06x1.64	58	3551	

ON REQUEST

ON REQUEST

*Ornamental Street Lighting Equipment*

## HAZARD UNDERGROUND CABLE—Continued

## LEAD ENCASED, STEEL TAPE CABLE—Continued

Size B&S Gauge	Rubber Wall Inches	Lead Wall Inches	Thickness Steel Tape Inches	Working Voltage	Standard Lengths Feet	Approximate Outside Dia. Inches	Dia. Reel Inches	Shipping Wt., Lb. per 1000 Feet	List Price per 1000 Feet
<b>THREE-CONDUCTOR CABLE</b>									
10	$\frac{3}{8}$	$\frac{3}{8}$	.020	600	2000	.86	48	1200	
10	$\frac{3}{8}$	$\frac{3}{8}$	.030	600	2000	.90	48	1390	
10	$\frac{3}{8}$	$\frac{3}{16}$	.030	2500	1500	1.14	50	2141	
10	$\frac{1}{8}$	$\frac{5}{8}$	.030	3500	1500	1.31	52	2861	
10	$\frac{3}{8}$	$\frac{3}{8}$	.030	5000	1000	1.45	56	3336	
10	$\frac{6}{32}$	$\frac{3}{8}$	.030	6000	1000	1.59	62	3828	
8	$\frac{3}{8}$	$\frac{1}{16}$	.020	600	2000	.95	50	1770	
8	$\frac{3}{8}$	$\frac{3}{16}$	.030	600	2000	.99	50	1985	
8	$\frac{3}{8}$	$\frac{5}{16}$	.030	2500	1500	1.23	56	2660	
8	$\frac{1}{8}$	$\frac{5}{8}$	.030	3500	1000	1.37	56	3100	
8	$\frac{5}{32}$	$\frac{5}{16}$	.030	5000	1000	1.51	60	3600	
8	$\frac{6}{32}$	$\frac{3}{32}$	.040	6000	1000	1.73	64	4920	
6	$\frac{1}{16}$	$\frac{1}{16}$	.030	600	1500	1.14	54	2260	
6	$\frac{3}{32}$	$\frac{3}{16}$	.030	2500	1500	1.31	56	3000	
6	$\frac{1}{8}$	$\frac{5}{16}$	.030	3500	1000	1.45	56	3460	
6	$\frac{3}{32}$	$\frac{5}{16}$	.030	5000	1000	1.59	60	3950	
6	$\frac{6}{32}$	$\frac{3}{32}$	.040	6000	1000	1.80	66	5344	

ON REQUEST

## LEAD ENCASED CABLE

Size B&S Gauge	Rubber Wall Inches	Lead Wall Inches	Working Voltage	Standard Lengths Feet	Approximate Outside Dia. Inches	Dia. Reel Inches	Shipping Wt., Lb. per 1000 Feet	List Price per 1000 Feet
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## SINGLE-CONDUCTOR CABLE

10	$\frac{3}{8}$	$\frac{3}{8}$	600	2000	.33	34	312	
10	$\frac{3}{8}$	$\frac{3}{16}$	2500	2000	.46	36	561	
10	$\frac{1}{8}$	$\frac{3}{16}$	3500	2000	.52	38	666	
10	$\frac{5}{32}$	$\frac{3}{16}$	5000	1500	.58	40	775	
10	$\frac{6}{32}$	$\frac{3}{16}$	6000	1500	.65	42	890	
8	$\frac{3}{8}$	$\frac{3}{8}$	600	2500	.36	36	370	
8	$\frac{3}{8}$	$\frac{3}{16}$	2500	2500	.49	40	620	
8	$\frac{1}{8}$	$\frac{3}{16}$	3500	2000	.55	40	735	
8	$\frac{5}{32}$	$\frac{3}{16}$	5000	1500	.61	40	810	
8	$\frac{6}{32}$	$\frac{3}{16}$	6000	1500	.67	44	961	
6	$\frac{1}{16}$	$\frac{1}{16}$	600	2500	.46	40	605	
6	$\frac{3}{32}$	$\frac{1}{16}$	2500	2000	.52	40	710	
6	$\frac{1}{8}$	$\frac{1}{16}$	3500	2000	.58	42	820	
6	$\frac{3}{32}$	$\frac{1}{16}$	5000	1500	.64	42	940	
6	$\frac{6}{32}$	$\frac{1}{16}$	6000	1500	.71	44	1034	

ON REQUEST

## TWO-CONDUCTOR CABLE

10	$\frac{3}{8}$	$\frac{3}{8}$	600	2000	.33x .57	40	588	
10	$\frac{3}{8}$	$\frac{3}{16}$	2500	2000	.46x .79	44	954	
10	$\frac{1}{8}$	$\frac{3}{16}$	3500	1500	.52x .92	42	1142	
10	$\frac{5}{32}$	$\frac{3}{16}$	5000	1500	.58x 1.04	44	1327	
10	$\frac{6}{32}$	$\frac{3}{16}$	6000	1000	.65x 1.17	46	1536	
8	$\frac{3}{8}$	$\frac{3}{8}$	600	2500	.36x .63	44	735	
8	$\frac{3}{8}$	$\frac{3}{16}$	2500	2000	.49x .85	44	1070	
8	$\frac{1}{8}$	$\frac{3}{16}$	3500	1500	.55x .97	44	1260	
8	$\frac{5}{32}$	$\frac{3}{16}$	5000	1500	.61x 1.10	46	1450	
8	$\frac{6}{32}$	$\frac{3}{16}$	6000	1000	.70x 1.25	48	1992	
6	$\frac{1}{16}$	$\frac{1}{16}$	600	2000	.46x .79	44	1080	
6	$\frac{3}{32}$	$\frac{1}{16}$	2500	2000	.52x .92	46	1220	
6	$\frac{1}{8}$	$\frac{1}{16}$	3500	1500	.58x 1.04	44	1410	
6	$\frac{3}{32}$	$\frac{1}{16}$	5000	1500	.64x 1.16	48	1620	
6	$\frac{6}{32}$	$\frac{1}{16}$	6000	1000	.74x 1.32	48	2180	

ON REQUEST

## THREE-CONDUCTOR CABLE

10	$\frac{3}{8}$	$\frac{3}{8}$	600	2000	.58	42	698	
10	$\frac{3}{8}$	$\frac{3}{16}$	2500	1500	.82	46	1214	
10	$\frac{1}{8}$	$\frac{3}{16}$	3500	1500	.99	52	1781	
10	$\frac{5}{32}$	$\frac{3}{16}$	5000	1000	1.13	52	2115	
10	$\frac{6}{32}$	$\frac{3}{16}$	6000	1000	1.27	54	2477	
8	$\frac{3}{8}$	$\frac{3}{8}$	600	2000	.67	46	1210	
8	$\frac{3}{8}$	$\frac{3}{16}$	2500	1500	.91	50	1660	
8	$\frac{1}{8}$	$\frac{3}{16}$	3500	1000	1.05	50	1970	
8	$\frac{5}{32}$	$\frac{3}{16}$	5000	1000	1.19	54	2320	
8	$\frac{6}{32}$	$\frac{3}{16}$	6000	1000	1.37	60	3092	
6	$\frac{1}{16}$	$\frac{1}{16}$	600	1500	.82	48	1350	
6	$\frac{3}{32}$	$\frac{1}{16}$	2500	1500	.99	50	1920	
6	$\frac{1}{8}$	$\frac{1}{16}$	3500	1000	1.13	50	2250	
6	$\frac{3}{32}$	$\frac{1}{16}$	5000	1000	1.27	54	2600	
6	$\frac{6}{3$							

## HAZARD RUBBER COVERED WIRE

In an ornamental street lighting system the underground cable is usually run as far as the disconnecting pothead or safety coil in the base of the post. From this point No. 6 or No. 8 B&S single-conductor wire is used to carry the current to the lamp socket.

Hazard wire is carefully made in accordance with the best commercial practice. It is carefully inspected and before acceptance must withstand insulation tests far in excess of its normal working pressure.

The No. 8 and No. 6, for 600 volts and

2500 volts working pressure, are shipped in coils. No. 8, 3500-volt wire in less than 300-feet lengths, is furnished in coils, longer lengths on reels. All 5000-volt wire is shipped on reels.

**Prices** are f.o.b. factory, Wilkes-Barre, Pa.

### LIST PRICES

Size B&S Gauge	Rubber Wall Inches	Working Voltage	Approximate Outside Dia. Inches	Shipping Wt., Lb. per 1000 Feet	List Price per 1000 Feet
10	$\frac{3}{16}$ double braid	600	.30	62	
10	$\frac{3}{32}$ double braid	2500	.39	112	
10	$\frac{1}{8}$ double braid	3500	.45	142	
10	$\frac{3}{16}$ double braid	5000	.53	192	
10	$\frac{6}{32}$ double braid	6000	.60	238	
8	$\frac{3}{16}$ double braid	600	.33	90	
8	$\frac{3}{32}$ double braid	2500	.43	150	
8	$\frac{1}{8}$ double braid	3500	.50	180	
8	$\frac{5}{32}$ double braid	5000	.56	230	
8	$\frac{6}{32}$ double braid	6000	.63	296	
6	$\frac{1}{16}$ double braid	600	.40	150	
6	$\frac{3}{32}$ double braid	2500	.47	200	
6	$\frac{1}{8}$ double braid	3500	.53	240	
6	$\frac{3}{16}$ double braid	5000	.60	300	
6	$\frac{6}{32}$ double braid	6000	.66	350	

ON REQUEST



SHERIDAN ROAD, CHICAGO. THE FIRST INSTALLATION OF ORNAMENTAL ASYMMETRIC STREET LIGHTING IN THE WORLD

**GLASSWARE FOR STREET LIGHTING UNITS****WESTINGHOUSE-HOLOPHANE BI-LUX REFRACTORS**

BI-LUX REFRACTOR, CYLINDRICAL TYPE



BI-LUX REFRACTOR, BOWL TYPE

The flux from any light source naturally radiates in all directions. One of the most important requirements of street lighting is a uniform intensity upon the roadway and sidewalks so that pedestrians and drivers may proceed in safety and comfort.

Prior to the advent of the Bi-lux refractor a uniform illumination on the street surface was only possible if the units were placed at intervals so close as to be impracticable from the standpoint of cost. Even then it was difficult to see beyond the nearest unit. In the days of slow-moving vehicles this condition was not of great moment, but with the necessarily greater speed of modern traffic, the need of good "visibility" at a greater distance on our city streets is becoming of the utmost importance.

To meet this requirement has come the Bi-lux refractor. First introduced to the lighting profession at the 1923 convention of the Illuminating Engineering Society at Lake George, New York, this device has aroused a nation-wide interest and is generally conceded to have marked the greatest advance in the art of ornamental street lighting since the introduction of the type C lamp.

As its name implies the Bi-lux refractor produces a graduated distribution of light flux on the street surface in two main beams by means of refract-

ing prisms. Its chief function is to "build up" two wide paths of light diverging in opposite directions up and down the street. This is accomplished by intercepting that portion of the flux which radiates at wasteful angles and redirecting it in angles where it will be most useful.

The angle of maximum distribution of the two main beams is 22½ degrees from the curb line toward the roadway, and the intensity is so graduated that an evenly distributed light flux is "sprayed" on the street surface.

**Description**—The Bi-lux refractor is made in two types, cylindrical and bowl, the latter of which may be either open at the bottom or closed, as conditions require. In pendent fixtures which are designed to burn lamps base up, the closed bowl is recommended, while for post top lighting units, where the lamp usually burns base down, either the cylindrical type or the open bowl type may be used. The refractor consists of two glass elements nested one within the other and clamped together so as to form a single dust-tight unit. A series of horizontal prisms on the inner element bend the light flux downward in the direction of the street surface, and a series of vertical prisms on the outer element bend the light rays into the two main beams. The minimum distribution is in the direction of the sidewalk at right angles to the curb

line, and a slightly increased intensity is directed across the road in the opposite direction. The resultant illumination is evenly distributed and glare is reduced to a minimum.

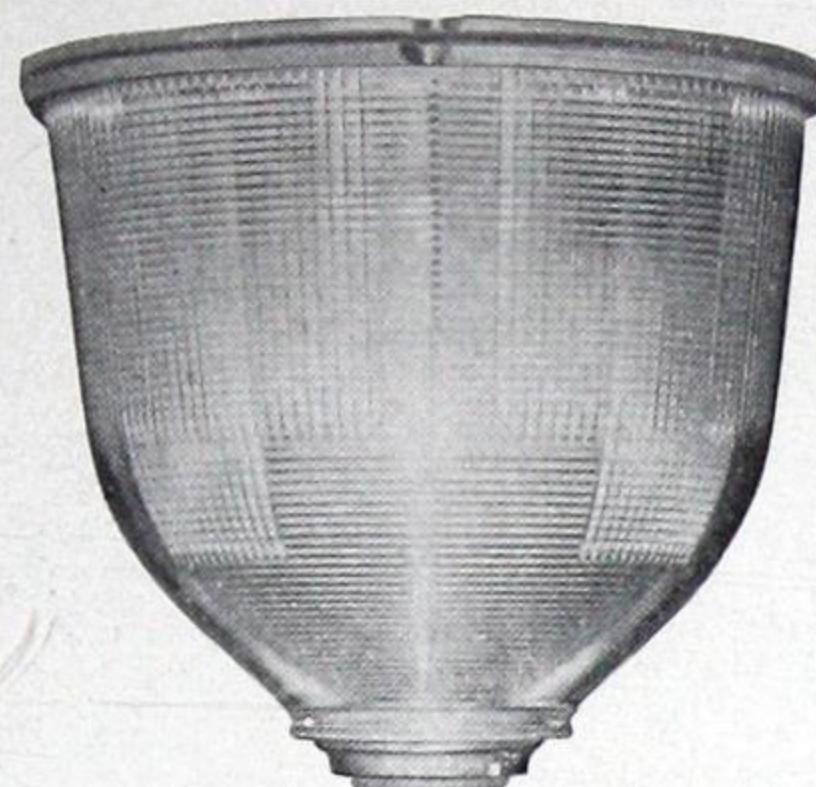
**Application**—The cylindrical type Bi-lux Refractor is designed for mounting in post top units when located close to the curb line. It controls practically all of the light from a type C lamp with the exception of a small portion of the upward illumination. The upward light, which is negligible compared to the total output of the lamp, may be redirected, if desired, by means of a specially designed reflector, or it may be utilized for illuminating the building fronts by equipping the lighting unit with a glass canopy. This is often desirable in downtown streets to bring out the details of the architecture of important buildings. The light from a 4000-lumen type C lamp under these conditions is approximately equivalent to 2000 candle power up and down the street, 400 candle power across the roadway and 250 candle power in the direction of the buildings.

The closed bowl type is designed for pendent units or Multilux streethoods only.

**List Prices**—For list prices, style numbers and dimensions, see page 908.

## GLASSWARE FOR STREET LIGHTING UNITS—Continued

## HOLOPHANE 2-WAY AND 4-WAY REFRACTORS

HOLOPHANE FOUR-WAY  
REFRACTORHOLOPHANE TWO-WAY  
REFRACTOR

Holophane 2-Way and 4-Way refractors are designed for use with overhead street lighting systems. Like the Bi-lux refractor they deflect a large part of the upward light of the lamp in a downward direction and a small part of the downward light upward, to approximate closely, in any vertical plane, the ideal distribution for even illumination of the street. In addition to this they redistribute the light laterally, or sideways, in such a way as to conserve a large part of the light which otherwise would be spilled outside of the street area. This lateral light distribution makes possible 40 to 50 per cent more light on the surface than obtained by the best equipment heretofore available for this purpose.

**Description**

The 2-Way and 4-Way refractors are of the standard 8½-inch bowl size. To insure proper orientation with respect to the street, three notches are placed in the flange at fixed but unequal spacing. These notches engage lugs in the combination globe and refractor ring so that when the Luxsolite pendant or Multilux streethood is properly set, with respect to the street, the refractor can only fit in the correct position to properly illuminate the street area.

**Construction**

The well-known Holophane two-piece construction is used, comprising, for each refractor, two pieces of glass which nest together. The outside of the inner piece carries horizontal refracting prisms which turn the greater part of the upward light downward and some of the downward light upward, to produce the correct distribution of light in a vertical plane. The inside of the outer piece carries vertical refracting prisms which redistribute the light laterally or sideways. In the 4-Way refractor, these prisms divide the light into four wide beams. The inside of the inner piece of the refractor is smooth and the outside of the outer piece is smooth. When the two pieces of glass are clamped together by means of a large nut, with suitable gaskets, the complete refractor is smooth inside and outside and all of the prisms are enclosed in a dust-tight chamber. This prevents the collection of dirt on the prisms and facilitates the cleaning of the exposed surfaces.

The 2-Way refractor differs from the 4-Way only in prismatic, not in mechanical, construction. The vertical prisms divide the light laterally into two broad

beams instead of four. These beams are directly opposite each other so that when the 2-Way refractor is mounted in the center of the street, the street is lighted evenly in both directions.

**Application**

These refractors are designed for suspension above the center of the street; the 2-Way between intersections and the 4-Way at intersections. Either cable suspensions or mast-arms may be used. This equipment is particularly suitable for small towns and villages that cannot finance an ornamental system of street lighting and yet, because of a large amount of automobile traffic, require an effective and economical illumination of arterial thoroughfares. In sparsely settled residential districts they allow wider spacing of units and smaller sizes of lamps and still provide a satisfactory illumination, which can be easily augmented as the neighborhood builds up by simply substituting large lamps. On treeless residential streets they materially reduce the annoyance caused by light shining on porches or in windows and still, if properly mounted, give adequate light on the sidewalks.

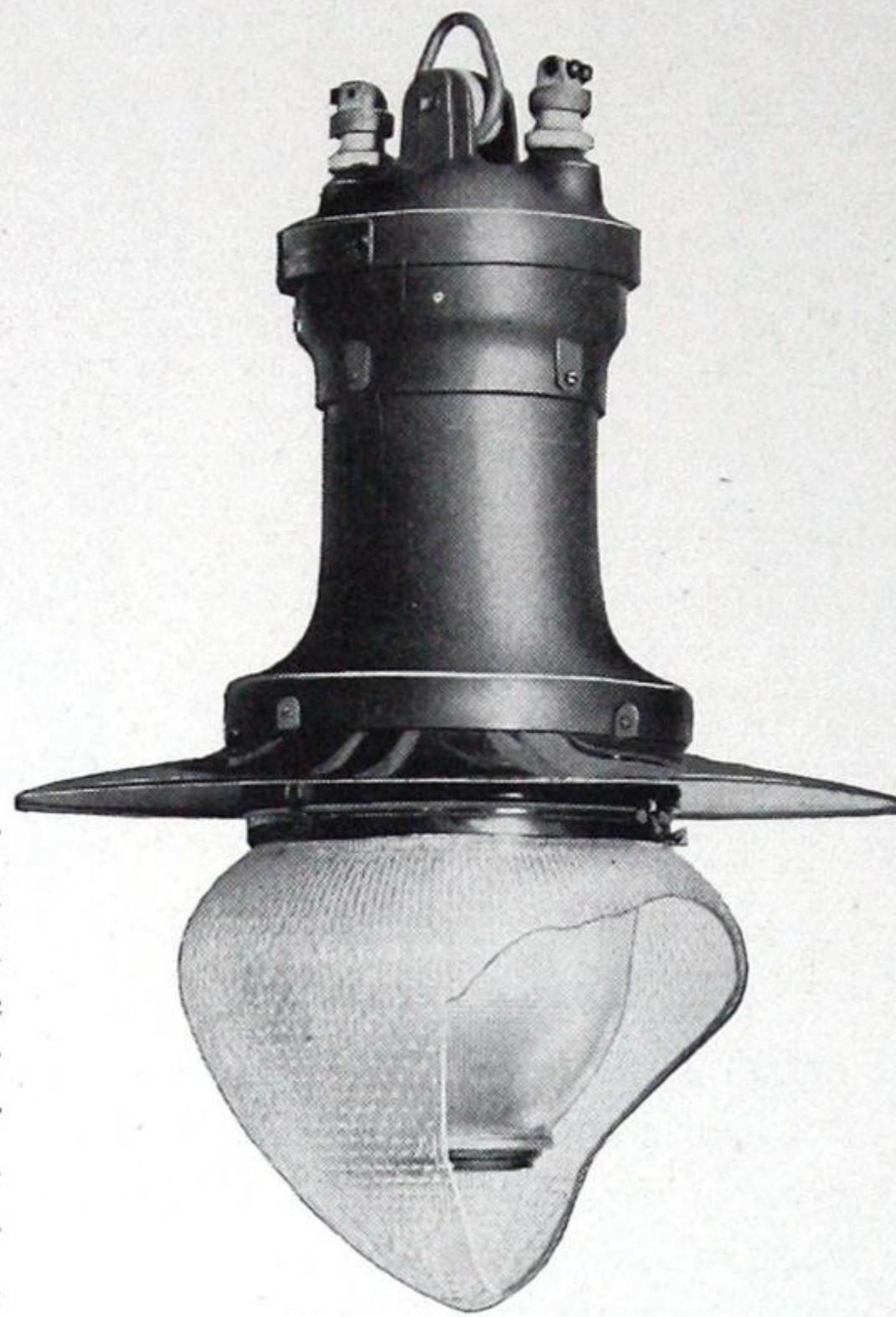
**List Prices**—For list prices, style numbers and dimensions, see page 908.

## GLASSWARE FOR STREET LIGHTING UNITS—Continued

## HOLOPHANE SUPERLUX REFRACTORS

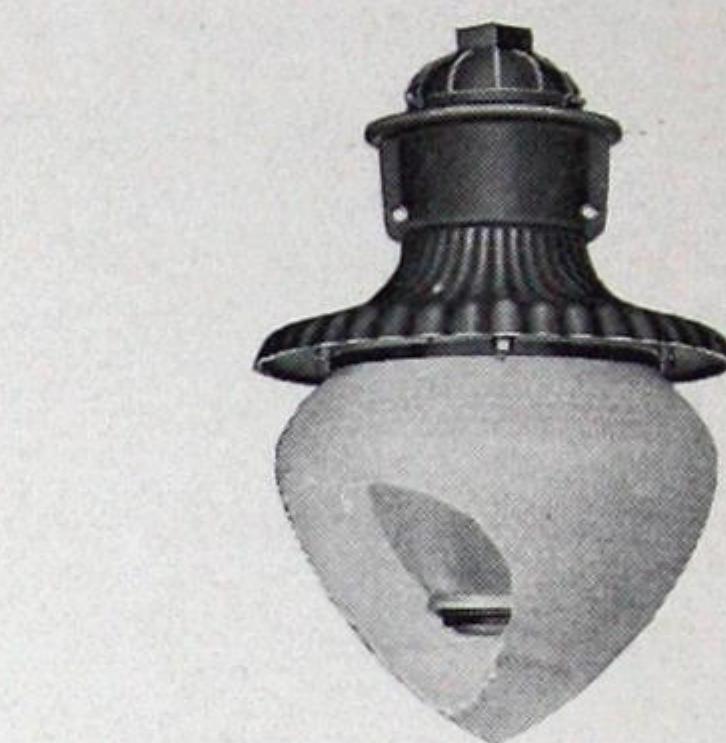


SUPERLUX REFRACTOR

LUXSOLITE PENDANT SHOWING  
SUPERLUX REFRACTOR WITH-  
IN RECTILINEAR GLOBE

The Holophane Superlux refractor consists of two pieces of pressed crystal glass nested one within the other and clamped together so as to form a single unit. The inside surface of the inner piece and the outside surface of the outer piece are smooth; so that in the assembled unit, both inside and outside surfaces are smooth, making cleaning easy. The outside surface of the inner piece has horizontal prisms so designed as to bend downward the upward emitted light and to bend upward a part of the light emitted downward. The light emitted downward near the vertical, is redistributed to give a good distribution under the unit. This arrangement of horizontal prisms greatly increases the light emitted at angles between 60 and

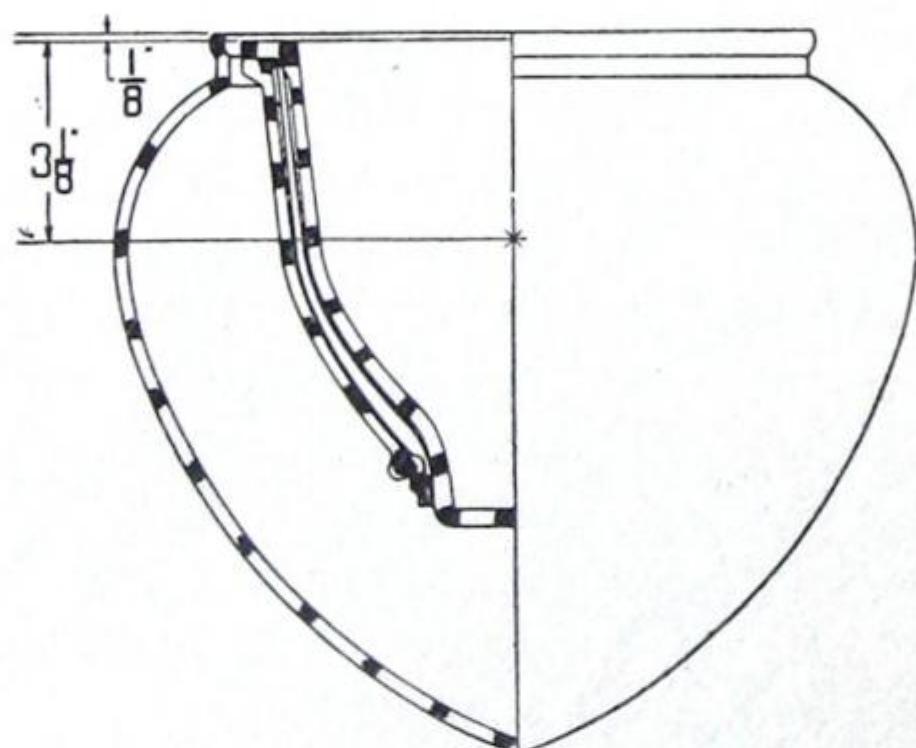
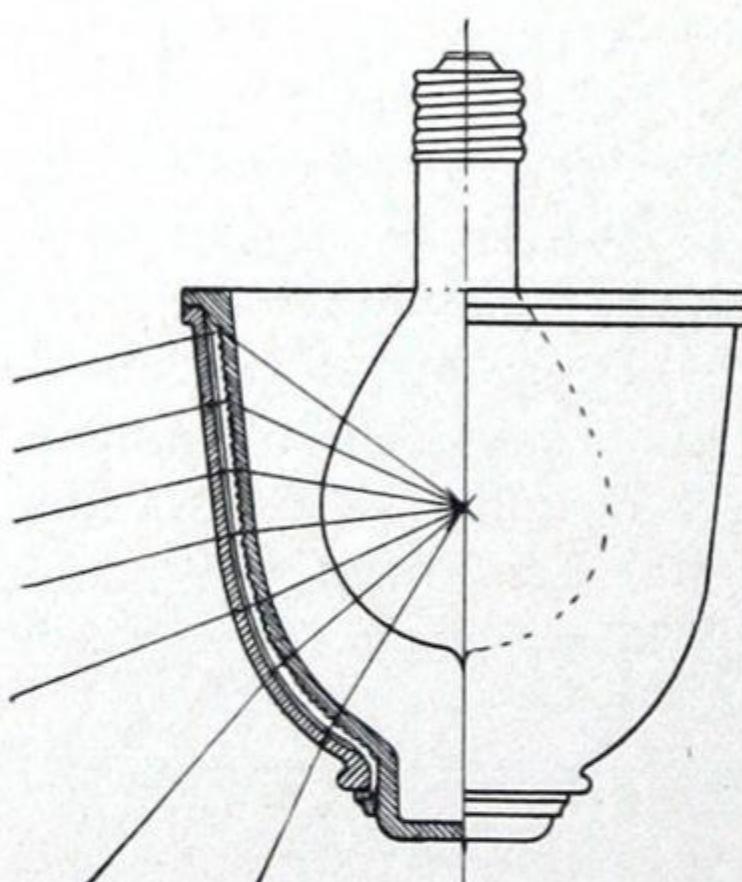
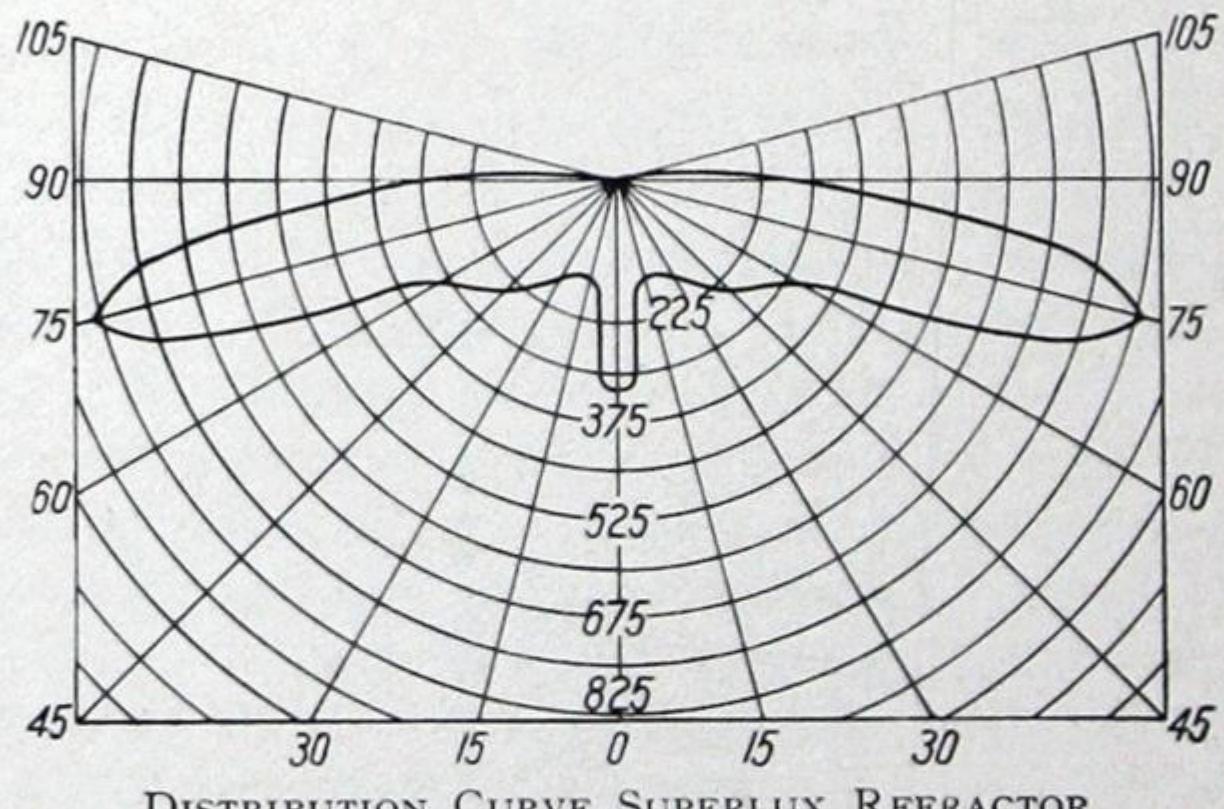
85 degrees with the vertical and hence greatly extends the radius of effective illumination, but at the expense of the light which would naturally fall directly under the unit. The inside surface of the outside piece has vertical flutes which, while not materially altering the dis-

MULTILUX STREETHOOD SHOWING SUPERLUX  
REFRACTOR WITHIN RECTILINEAR GLOBE

tribution produced by the inside piece, diffuse the light and reduce the brilliancy of the unshielded filament. In short, it is the function of the inside piece to produce the desired light distribution, while the outside piece diffuses the light and produces an attractive appearance in the unit as a whole. The two pieces are so fitted and clamped together that it is impossible for dirt, even in the most finely divided form, to get between them.

The Superlux Refractor is made in two types: The closed type which is always used with Luxsolite Dust-Proof Pendants, and the open type which is used with streethoods. It is very rugged in construction and not subject to excessive breakage.

**List Prices**—For list prices, style numbers and dimensions, see page 908.

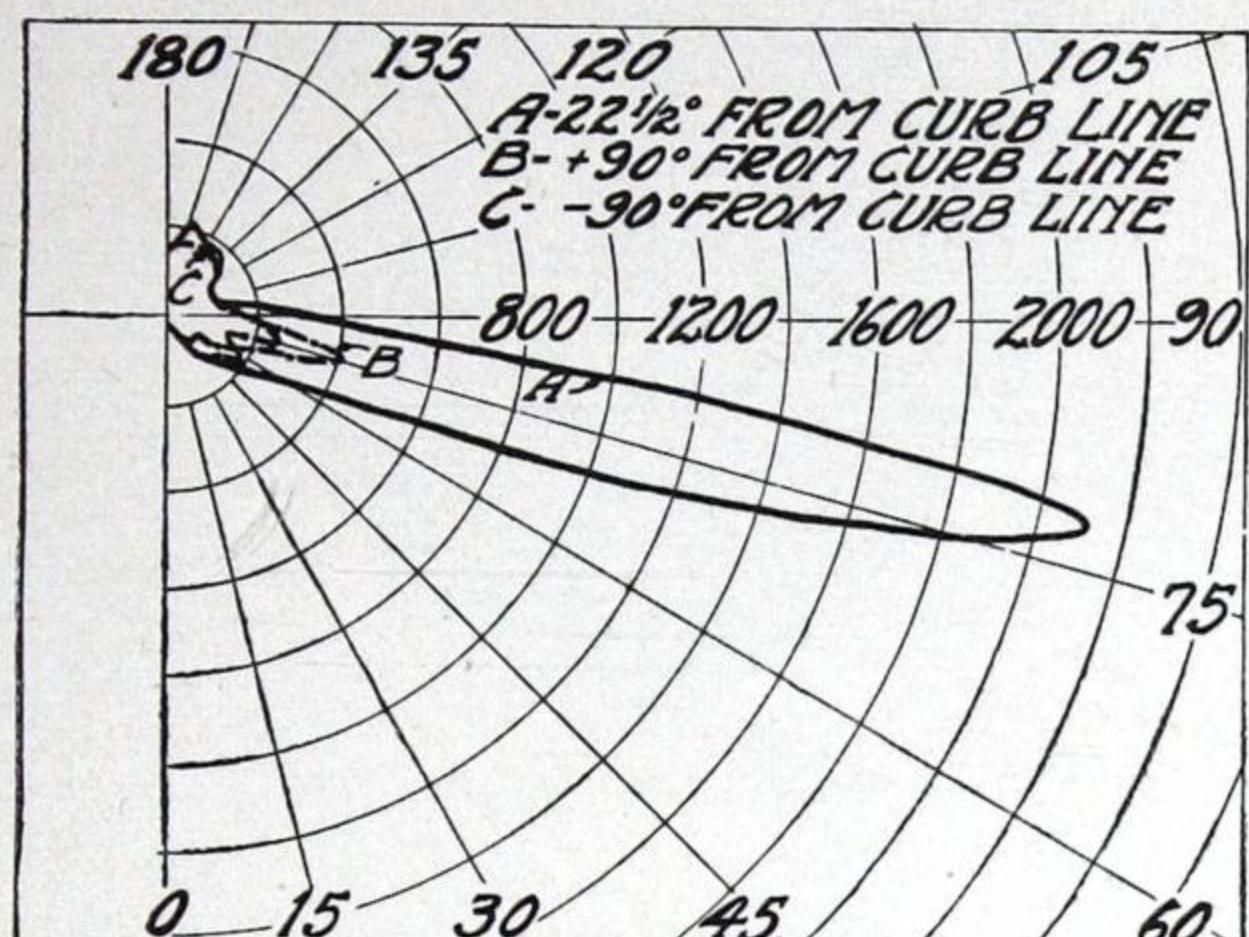
SHOWING CORRECT LIGHT CENTER, LOCATION  
AND RELATIVE POSITIONS OF REFRACTOR  
AND GLOBESHOWING HOW LIGHT RAYS ARE  
DIVERTED BY THE REFRACTING  
PRISMS

DISTRIBUTION CURVE SUPERLUX REFRACTOR

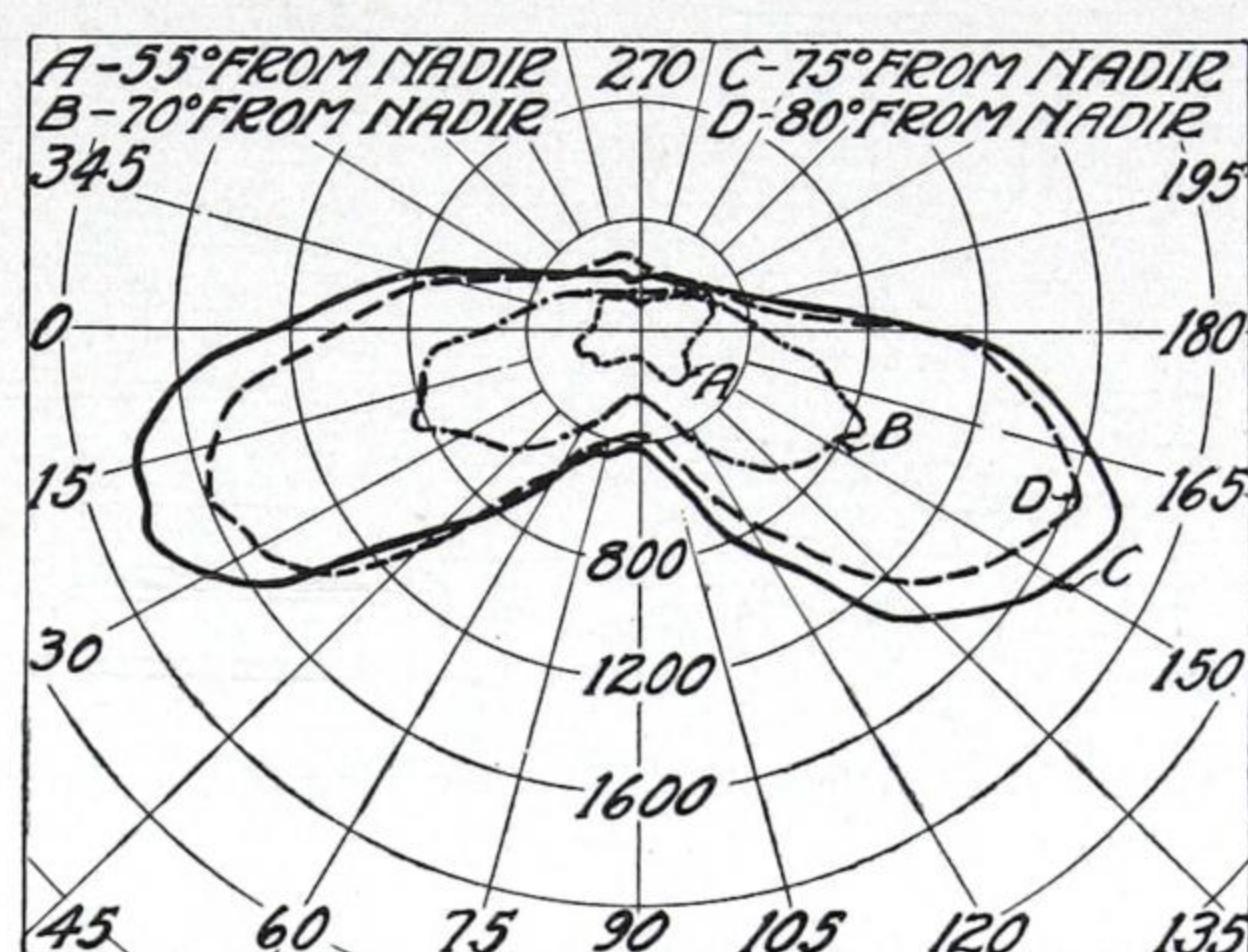
GLASSWARE FOR STREET LIGHTING UNITS—Continued

**HOLOPHANE REFRACTORS FOR ASYMMETRIC DISTRIBUTION  
IN STREET LIGHTING SERVICE**

CANDLE POWER DISTRIBUTION FROM WESTINGHOUSE BI-LUX REFRACTOR

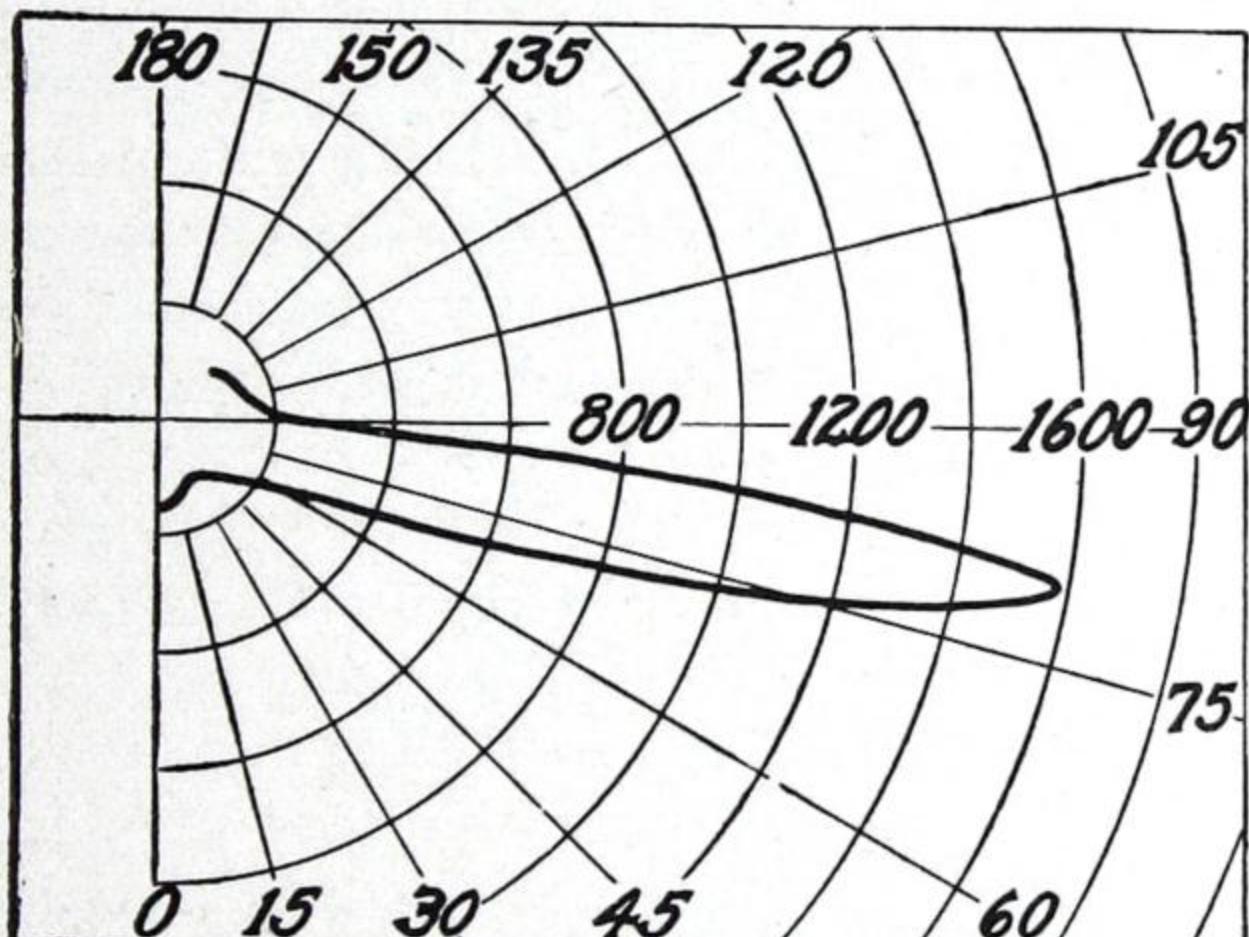


IN VERTICAL PLANES  $22\frac{1}{2}^{\circ}$  FROM THE CURB LINE

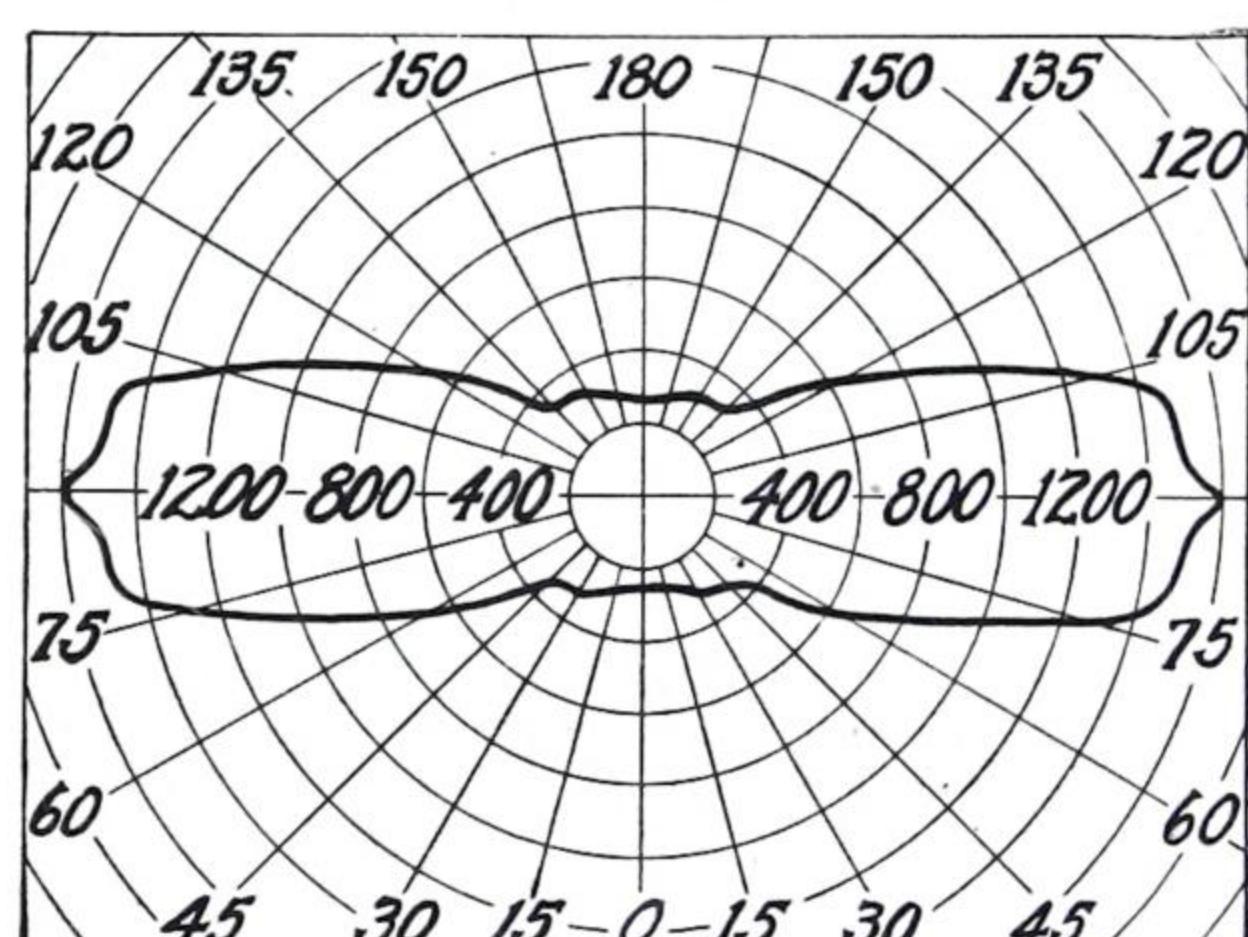


LATERAL DISTRIBUTION IN CONES  
 $55, 70, 75$  AND  $80^{\circ}$  FROM NADIR

CANDLE POWER DISTRIBUTION FROM  $8\frac{1}{2}$ -INCH 2-WAY REFRACTOR

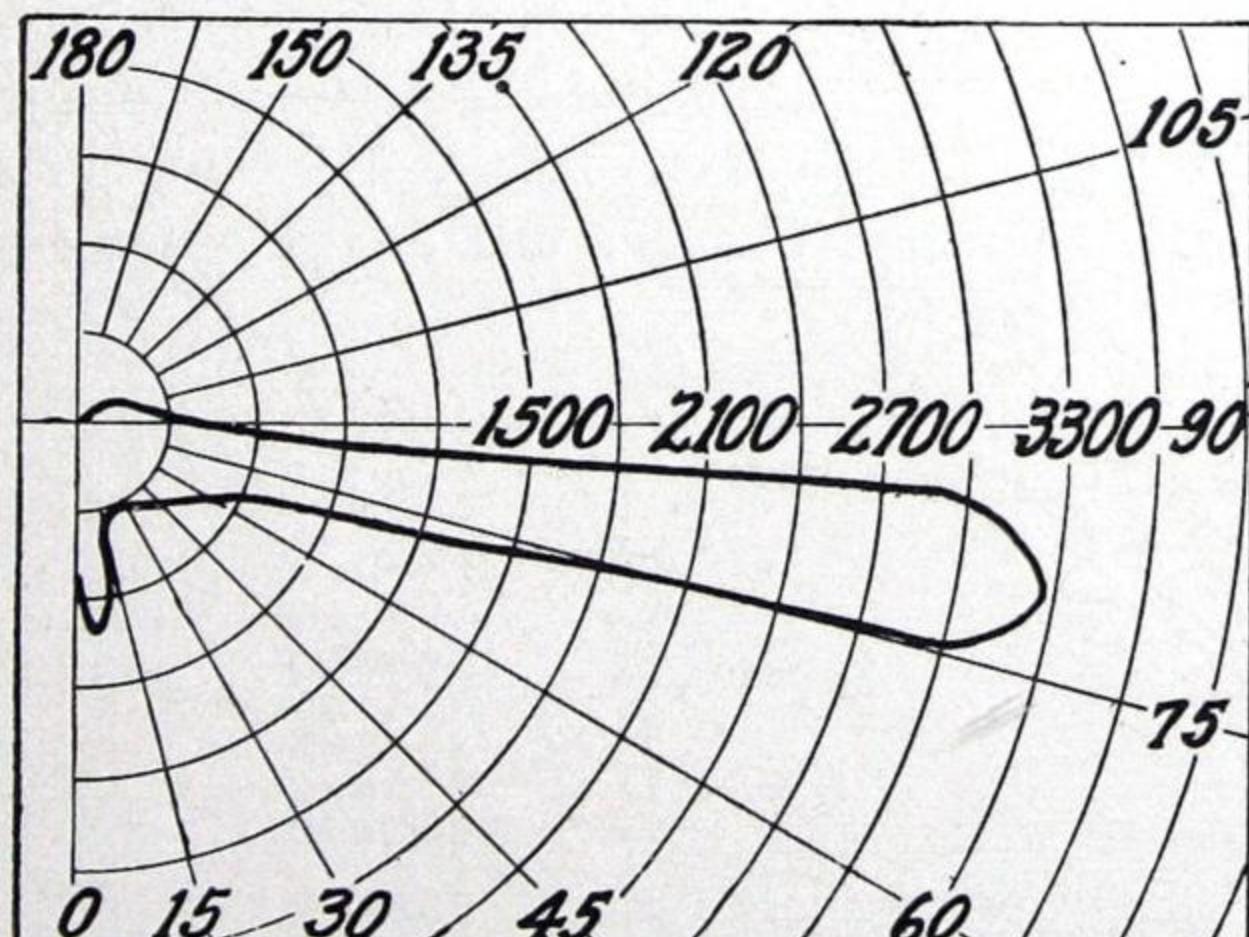


IN VERTICAL PLANE UP AND DOWN THE STREET

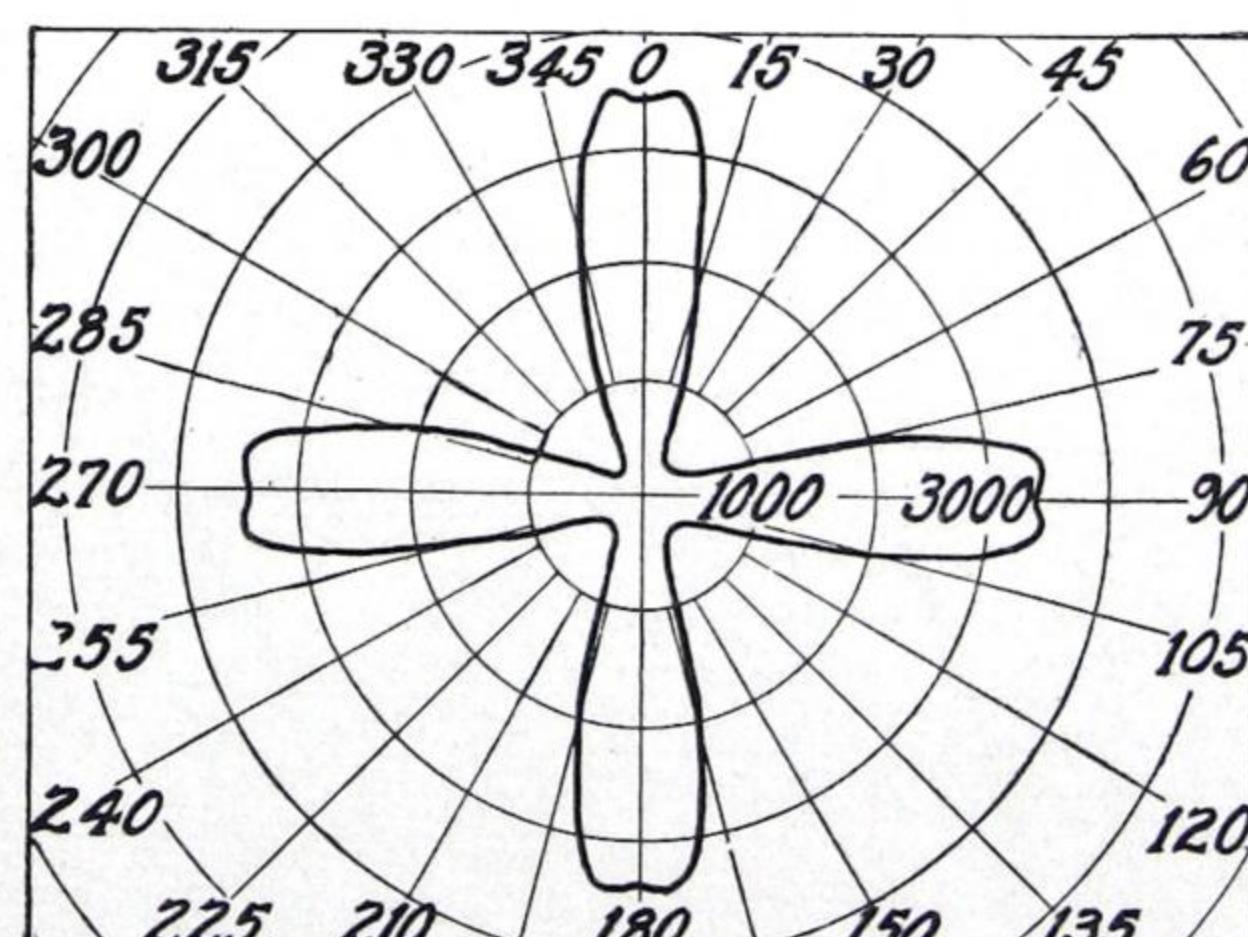


LATERAL DISTRIBUTION IN CONE  $80^{\circ}$  FROM NADIR

CANDLE POWER DISTRIBUTION FROM  $8\frac{1}{2}$ -INCH 4-WAY REFRACTOR



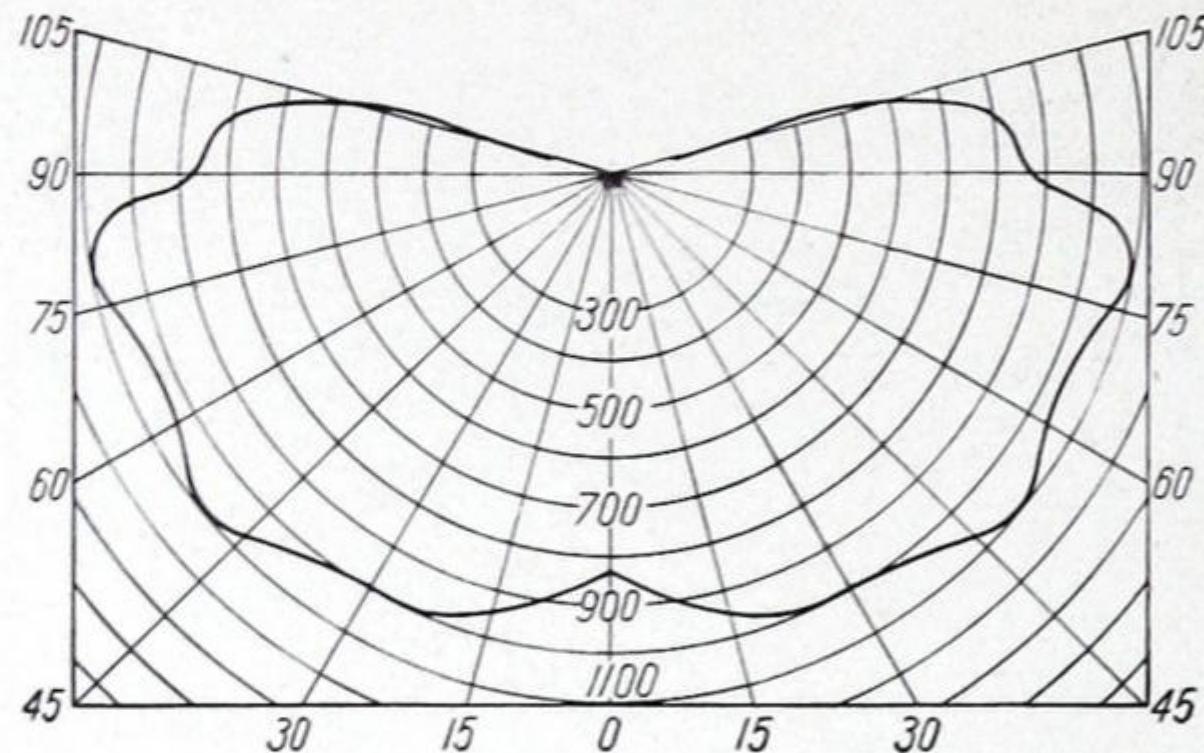
IN VERTICAL PLANE UP AND DOWN THE STREET



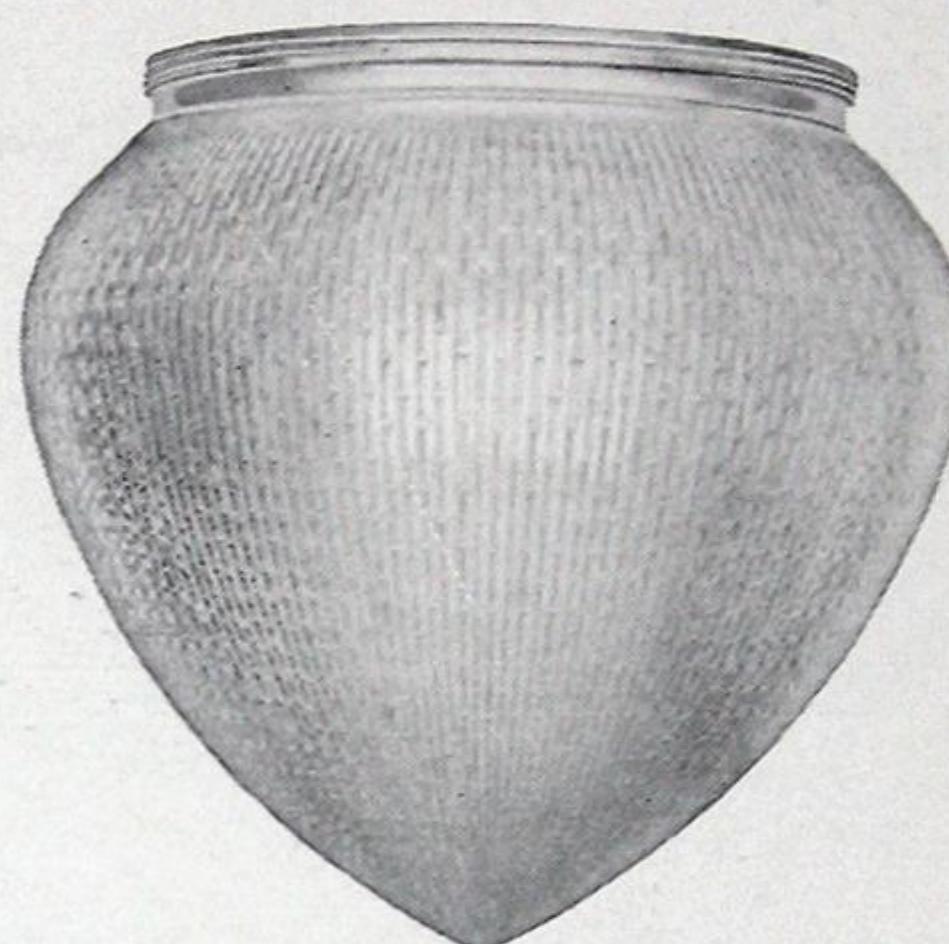
LATERAL DISTRIBUTION IN CONE  $80^{\circ}$  FROM NADIR

## GLASSWARE FOR STREET LIGHTING UNITS—Continued

## GLOBES FOR MULTILUX STREETHOODS AND LUXSOLITE PENDANTS



DISTRIBUTION CURVE, LIGHT ALABASTER RECTILINEAR GLOBE



LUXSOLITE RECTILINEAR GLOBE

**Rectilinear Globes**

Experience has shown that glare from a street lighting unit is not only unpleasant but extremely dangerous, blinding alike to pedestrians and vehicle drivers. Glare has sometimes been defined as misdirected light. A light source of high intrinsic brilliancy, such as an unshielded arc or the filament of a type C lamp unshielded by diffusing glassware invariably produces glare, and the pupil of the human eye becomes so contracted by the intensity of the light source that it cannot, with any degree of precision, discern objects, either stationary or in motion, between it and the point where the lamp is located. In fact for a considerable period after passing beyond the range of such a light source, the eye is still incapable of functioning normally.

The primary purpose of diffusing glassware on a street lighting unit is to convert the piercing glare of high-powered lamps into useful, comfortable, and properly distributed light. It is a well known fact that more unmodified light is required to see objects clearly

than is necessary when the glare is eliminated. Consequently, the use of diffusing glassware increases the utility of the light produced by the lamps, the percentage of increase depending upon the efficiency of the glassware itself.

Rectilinear glassware is blown in carefully prepared moulds by the most skillful glass blowers. The outer surface is made up of a series of horizontal and vertical flutes so arranged as to produce a diffusing and sparkling effect. The flutes are so arranged that the globe can be cleaned easily with a damp cloth. Rectilinear glass is furnished in two densities, light alabaster and dense alabaster. When refractors are used light alabaster globes are recommended.

Rectilinear globes have been designed to diffuse the light both by means of the opalescence of the glassware, and by the arrangement of the flutes. Its sparkling appearance is very attractive and since the absorption of light is very small the efficiency is correspondingly high.

**Monax Globes**

Monax glassware is the result of many

years of development in the glassmaking art. In common with all Luxsolite globes they are blown by hand. While this method introduces the human element in manufacturing, a careful inspection, under conditions similar to those in service, is made before the globe is accepted. Thus a uniform thickness in all parts of the globe is assured.

The diffusing effect provided by Monax glass is obtained without loss of light, because of the care taken in manufacture. By reflected light Monax glass has an appearance by day fully as attractive as it appears by transmitted light at night. They are blown as thin as is consistent with strength; thus glare is entirely absent and the lamp filament is not visible through the globe. Monax glassware presents no abraded surfaces on either the inside or the outside. No decomposition or chemical breakdown takes place; thus it is easily cleaned by simply wiping with a damp cloth.

**List Prices**—For list prices, style numbers and dimensions, see page 909.

### LIST PRICES HOLOPHANE REFRACTORS

Description
Bi-lux cylindrical type.....
Bi-lux open bowl type.....
Bi-lux closed bowl type.....
Superlux open type.....
Superlux closed type.....
2-Way.....
4-Way.....
Large bowl type.....
Skirted open type.....
Skirted closed type.....

Fig. No.	Style No.	Ship. Wt. Lb. Ea.	List Price
26	354010	10	\$35 00
22	354160	9	35 00
23	354161	9	35 00
22	352939	9	6 60
23	352940	9	6 60
28	353974	9	7 50
28	353975	9	7 50
25	351761	15	15 00
27	252212	8	6 60
27	336793	8	6 60

*Order by Style Number*

## GLASSWARE FOR STREET LIGHTING UNITS—Continued

### LIST PRICES—Continued

#### GLASS PANELS

Description	Fig. No.	Style No.	Ship. Wt. Lb., Each	List Price
Syenite side panels for Octagonal Junior lighting units.....	33	353331	13	\$0 60
Syenite top panels for Octagonal Junior lighting units.....	35	351737	8	60
Colonial opal side panels for Octagonal Junior lighting units.....	33	351548	13	1 10
Colonial opal top panels for Octagonal Junior lighting units.....	35	351738	8	1 10
Florentine side panels for Octagonal Junior lighting units.....	33	351557	13	60
Florentine top panels for Octagonal Junior lighting units.....	35	351739	8	60
Syenite side panels for Octagonal Senior lighting units.....	32	351375	19	80
Syenite top panels for Octagonal Senior lighting units.....	34	351377	11	80
Colonial opal side panels for Octagonal Senior lighting units.....	32	353332	19	1 30
Colonial opal top panels for Octagonal Senior lighting units.....	34	353333	11	1 30
Florentine side panels for Octagonal Senior lighting units.....	32	351565	19	80
Florentine top panels for Octagonal Senior lighting units.....	34	351564	11	80
Lower Syenite glass panels for Octagonal Junior Lantern.....	37	351645	7	60
Lower Colonial opal glass panels for Octagonal Junior Lantern.....	37	351655	7	1 10
Lower Florentine glass panels for Octagonal Junior Lantern.....	37	351483	7	60
Lower Syenite glass panels for Octagonal Senior Lantern.....	36	351490	9	60
Lower Colonial opal glass panel for Octagonal Senior Lantern.....	36	353334	9	1 10
Lower Florentine glass panels for Octagonal Senior Lantern.....	36	351566	9	60

#### GLOBES AND CANOPIES FOR POST TOP UNITS

Description	GLOBE				CANOPY			
	Fig. No.	Style No.	Ship. Wt. Lb.	List Price	Fig. No.	Style No.	Ship. Wt. Lb.	List Price
Sol-Lux Sr. Monax.....	5	336150	40	\$12 10	1	338918	22	\$ 7 80
Sol-Lux Sr. rectilinear light alabaster.....	5	354063	40	12 10	1	354062	22	7 80
Sol-Lux Sr. rectilinear dense alabaster.....	5	354132	40	12 10	1	354133	22	7 80
Sol-Lux Jr. Monax.....	6	336148	39	8 10	2	338919	20	6 30
Sol-Lux Jr. rectilinear light alabaster.....	6	354074	39	8 10	2	354073	20	6 30
Sol-Lux Jr. rectilinear dense alabaster.....	6	354130	39	8 10	2	354131	20	6 30
Paragon Sr. Monax.....	7	352914	45	11 00	3	345907	23	10 50
Paragon Sr. rectilinear light alabaster.....	7	353281	45	11 00	3	345908	23	10 50
Paragon Sr. rectilinear dense alabaster.....	7	354128	45	11 00	3	354129	23	10 50
Paragon Jr. Monax.....	8	353224	42	9 30	4	345909	20	8 50
Paragon Jr. rectilinear light alabaster.....	8	353282	42	9 30	4	345910	20	8 50
Paragon Jr. rectilinear dense alabaster.....	8	354126	42	9 30	4	354127	20	8 50
Washington, large size, light alabaster.....	13	354122	50	17 00	9	354121	25	7 30
Washington, medium size, light alabaster.....	14	354120	45	12 00	10	354119	23	5 50
Washington, small size, light alabaster.....	15	354118	40	11 60	11	354117	20	5 20
Cincinnati Monax for 8-inch fitter.....	16	351583	38	12 00	12	351581	23	10 50
Cincinnati Monax for 9 $\frac{3}{8}$ -inch fitter.....	20	351584	38	12 00	12	351581	23	10 50
Holophane ornamental refractor globe parts only.....	21	350529	75	36 00	17	354174	20	5 00

#### GLOBES FOR PENDENT UNITS

Description	Fig. No.	Style No.	Ship. Wt. Lb., Each	List Price
Luxsolite clear.....	18	220258	12	\$5 50
Luxsolite alabaster.....	18	220259	12	6 10
Luxsolite Monax.....	18	220260	12	6 10
Luxsolite rectilinear clear.....	18	350571	12	5 50
Luxsolite rectilinear light alabaster.....	18	350572	12	7 00
Luxsolite rectilinear dense alabaster.....	18	354139	12	7 00
Polaris rectilinear light alabaster.....	19	352498	10	7 00
Polaris rectilinear dense alabaster.....	19	352499	10	7 00
Sol-Lux diffuser Monax.....	24	336063	8	4 70

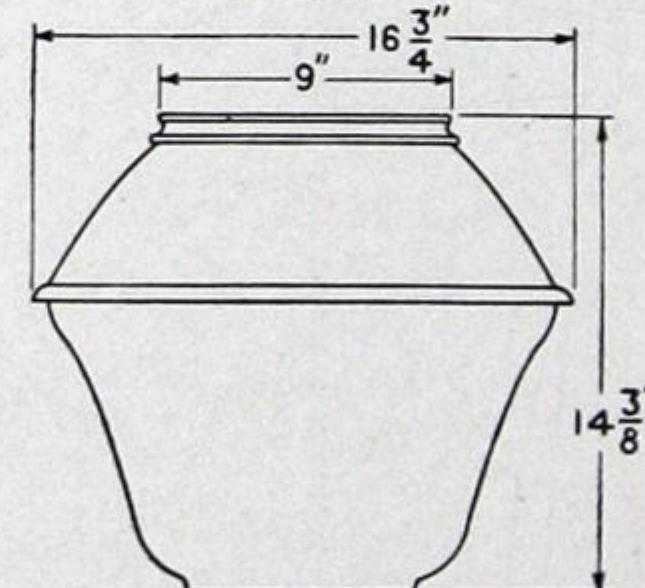
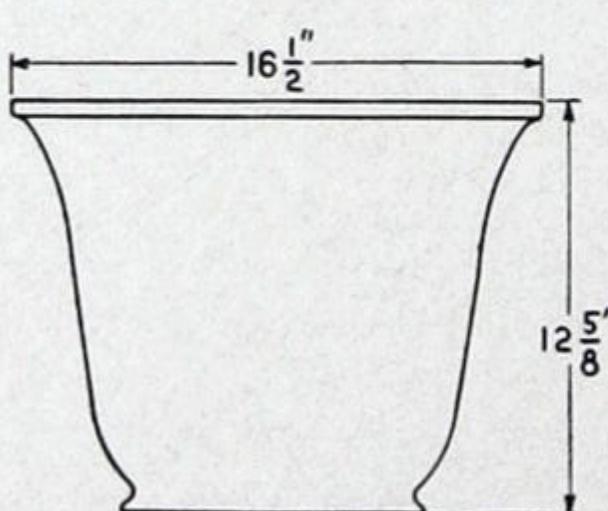
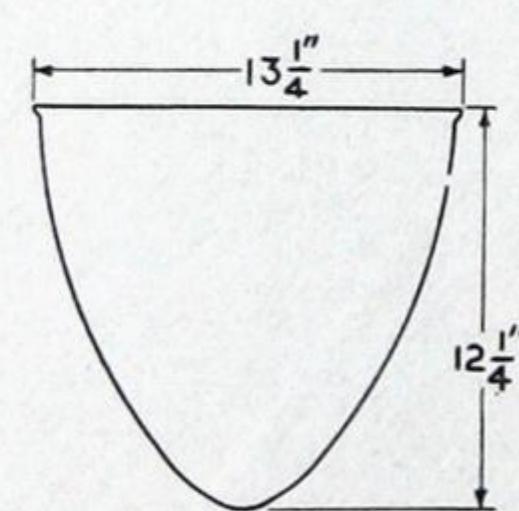
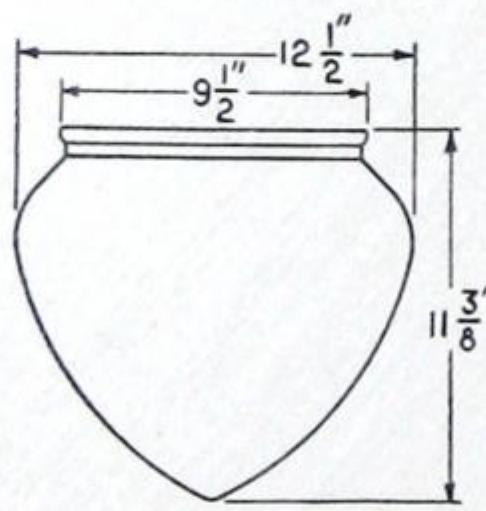
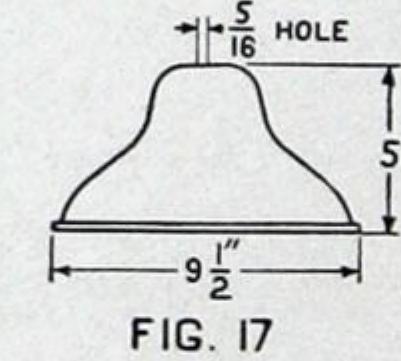
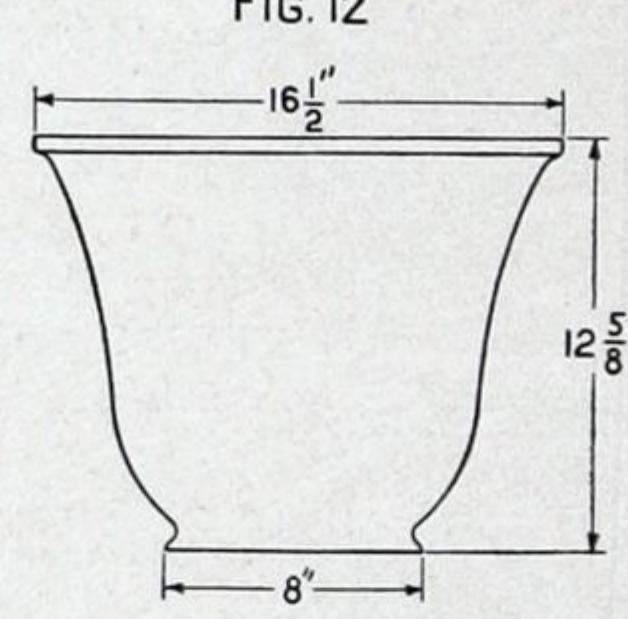
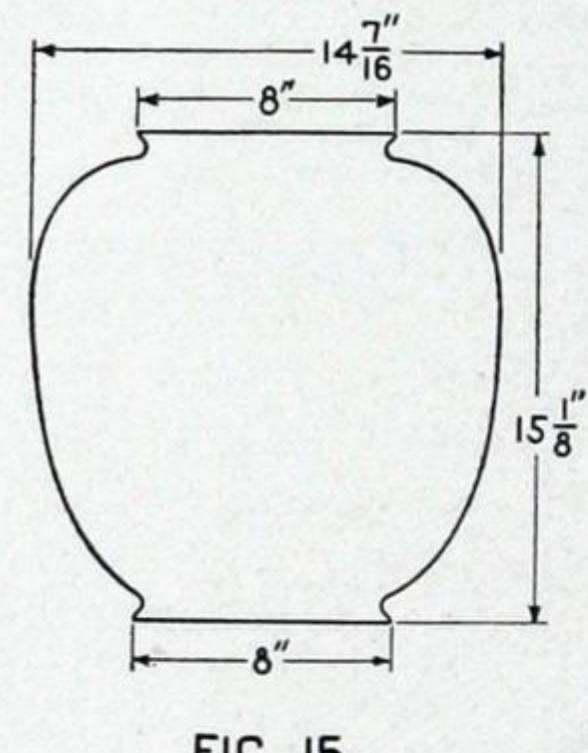
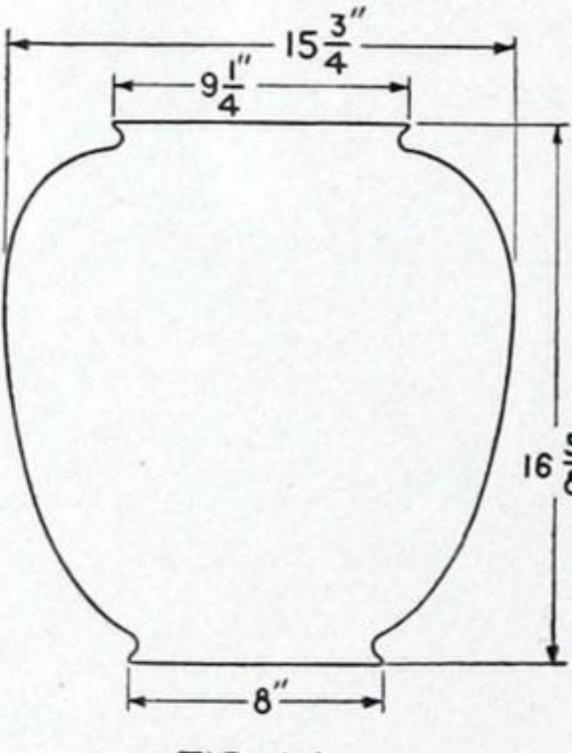
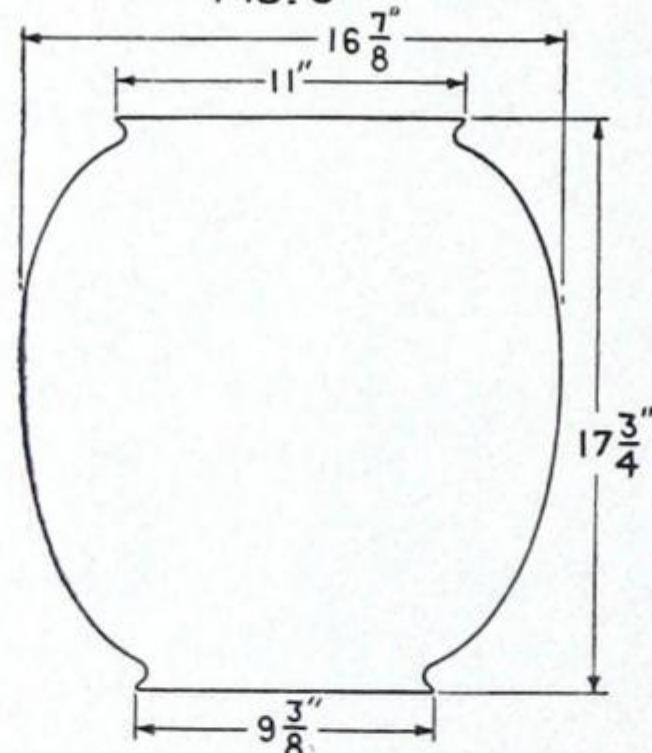
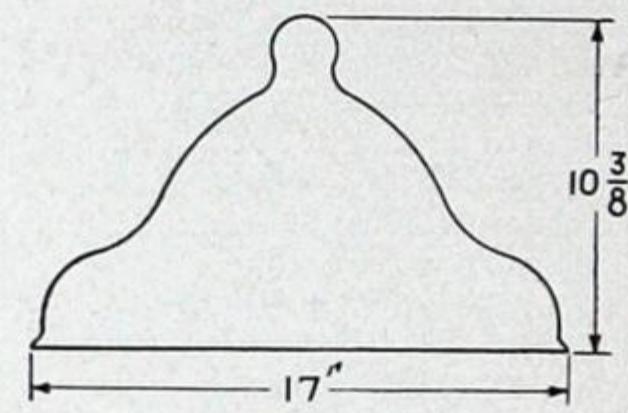
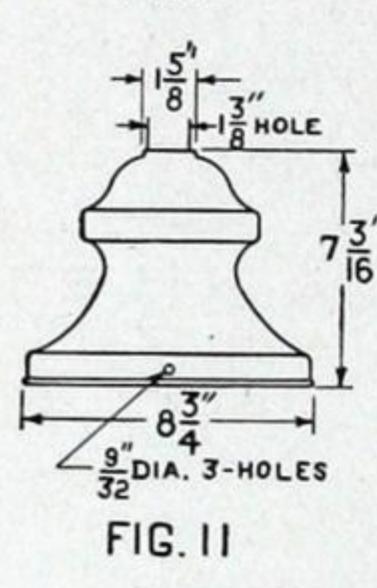
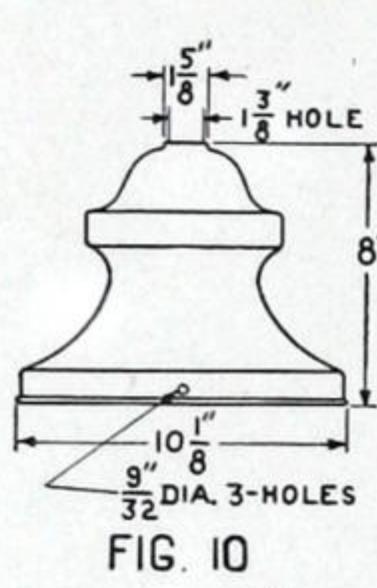
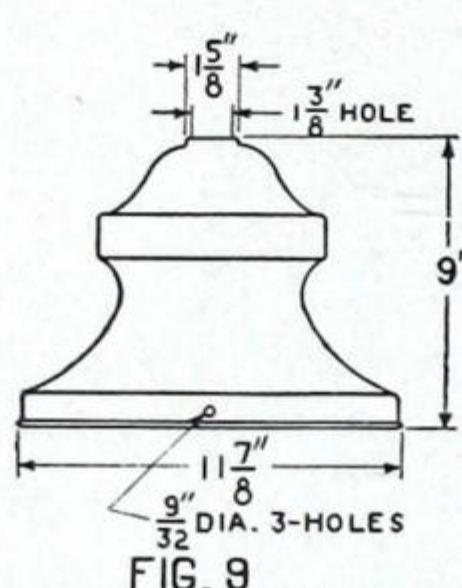
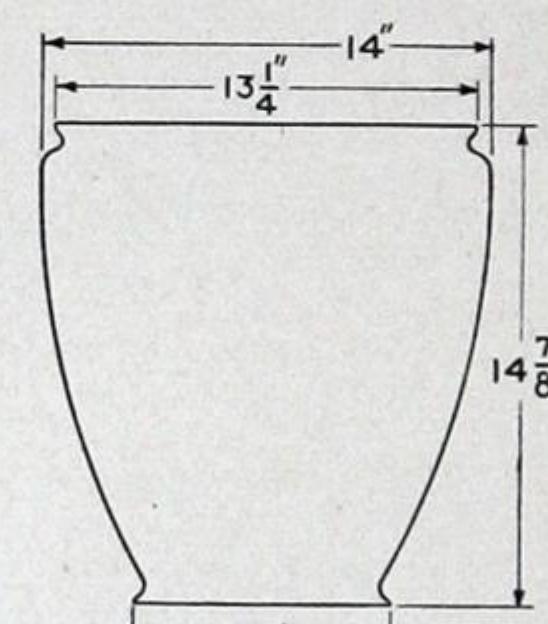
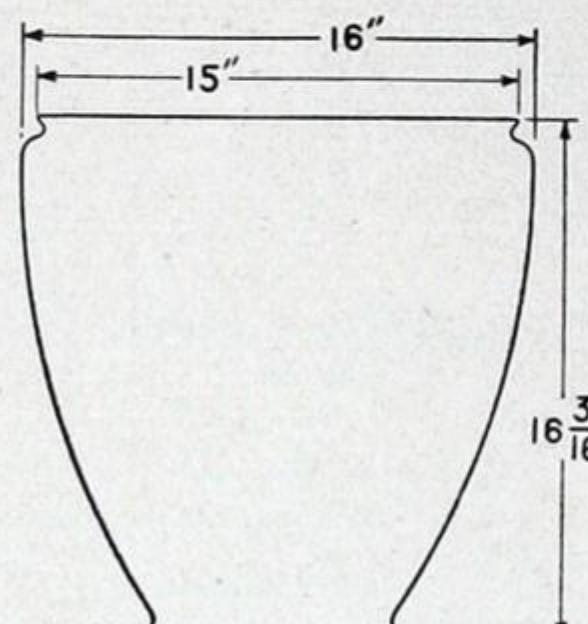
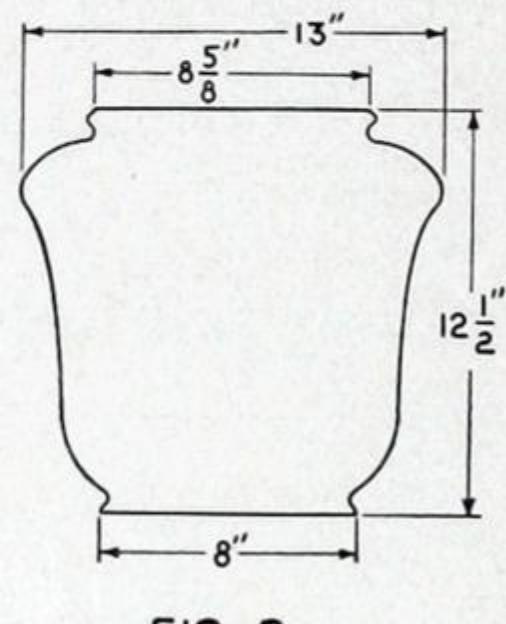
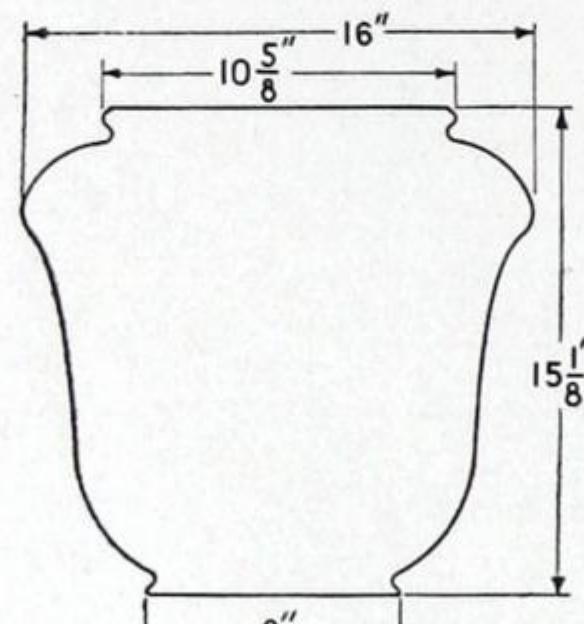
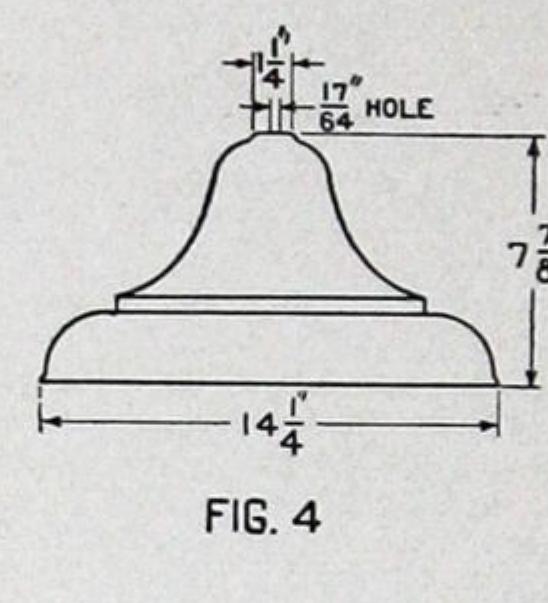
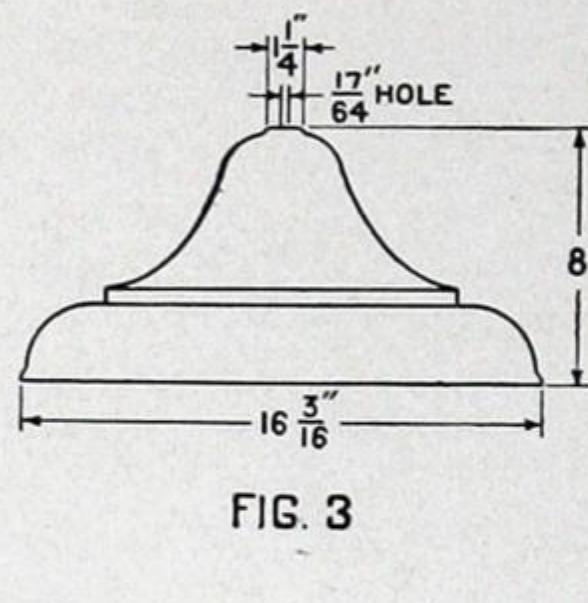
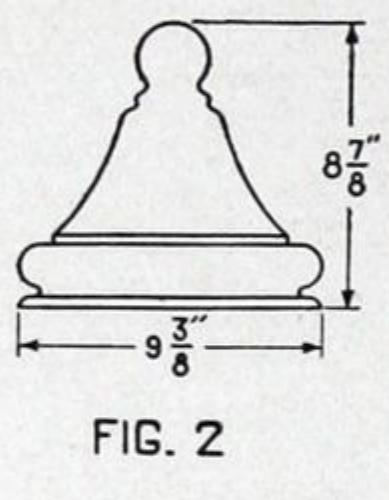
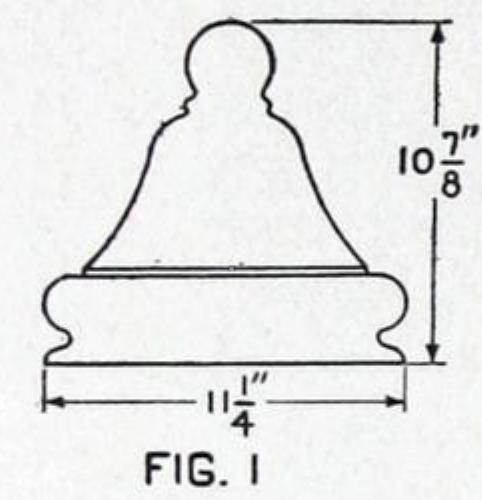
#### MONAX BALL GLOBES

Dia. of Globe, In.	DIAMETER OF FITTER, INCHES	Bottom	Top	Style No.	Ship. Wt. Lb. Each	List Price Per Doz.
8	6	..		335637	5	
9	6	..		335646	6	
10	6	..		335638	7	
12	6	..		335639	8	
12	6	6		335648	8	
12	8	..		335640	8	
14	8	6		335649	14	
14	7	..		335650	14	
14	8	..		335641	14	
16	8	..		335643	18	
16	8	6		335644	18	
18	8	..		335651	26	
20	8	..		335652	36	
12	8	$\frac{3}{4}$		351553	8	
12	6	Ruby Glass		335653	8	
14	8	Ruby Glass		335654	14	On Request

*Order by Style Number*

## GLASSWARE FOR STREET LIGHTING UNITS—Continued

## GLOBE DIMENSIONS IN INCHES



Dimensions are for reference only. For official dimensions apply to the nearest district office.

GLASSWARE FOR STREET LIGHTING UNITS—Continued

REFRACTOR DIMENSIONS IN INCHES

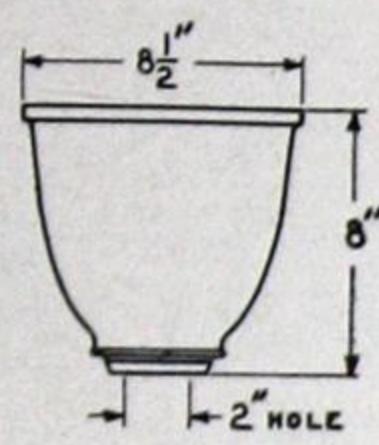


FIG. 22

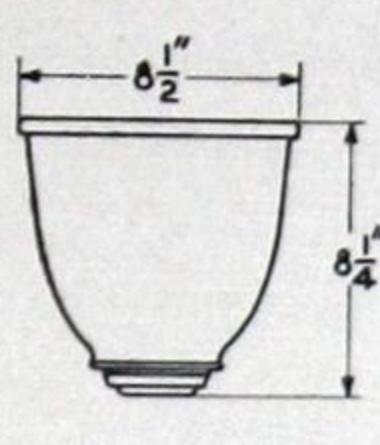


FIG. 23

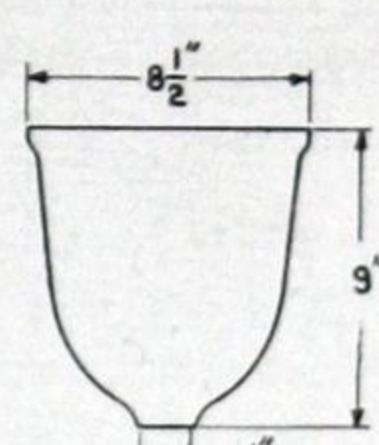


FIG. 24

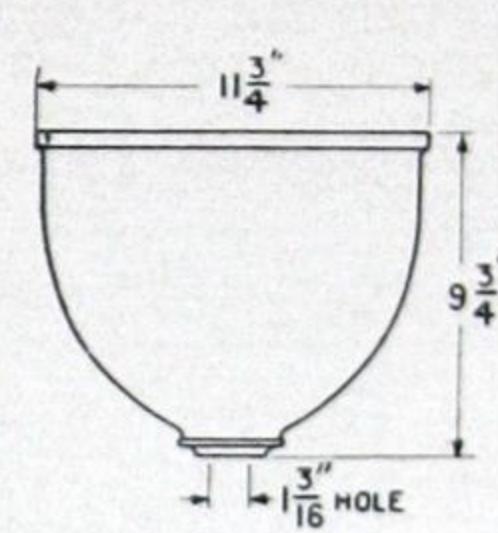


FIG. 25

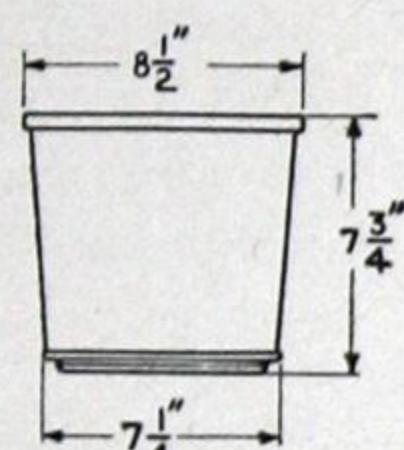


FIG. 26

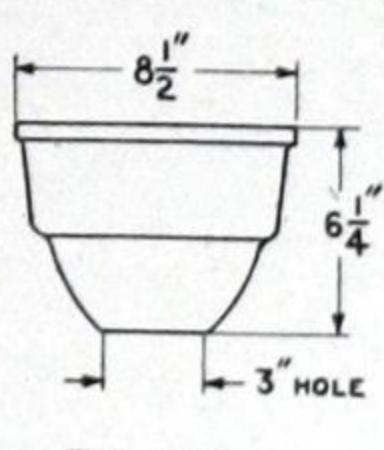


FIG. 27

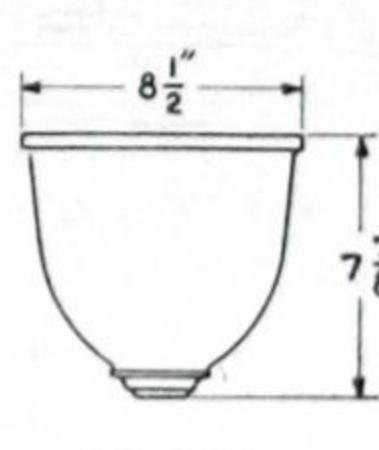


FIG. 28

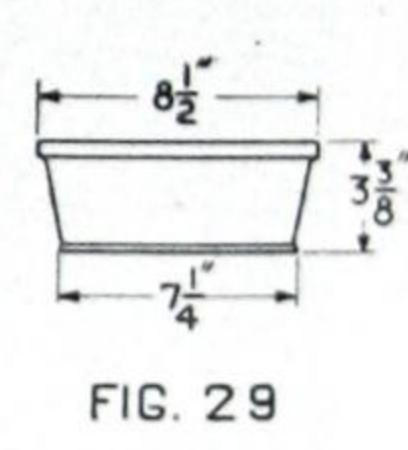


FIG. 29

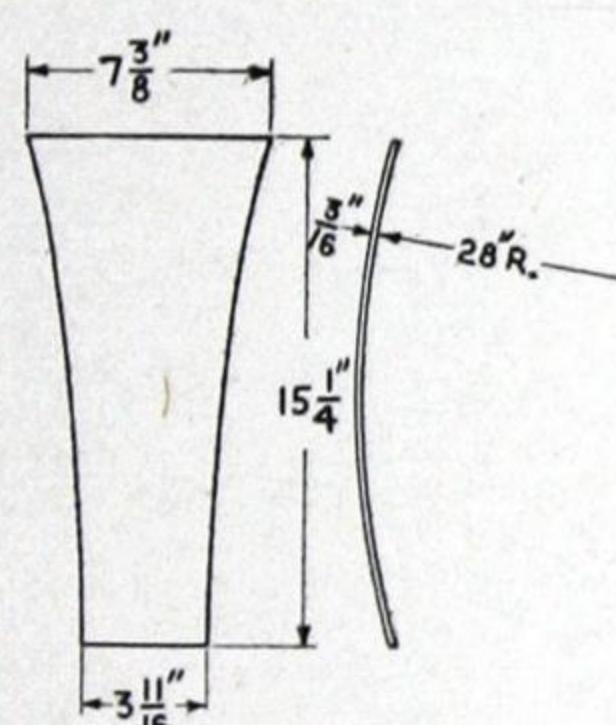


FIG. 30

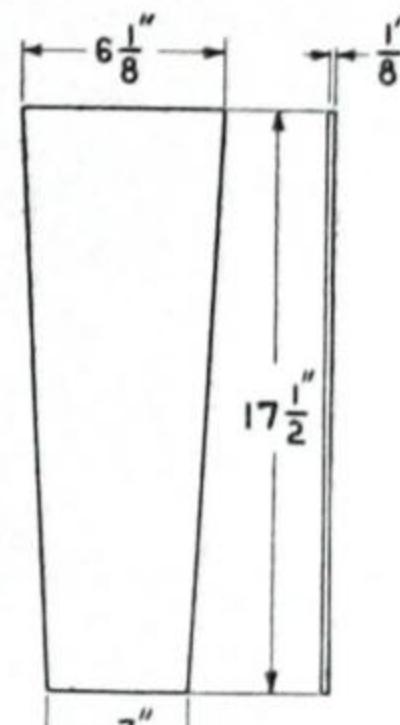


FIG. 31

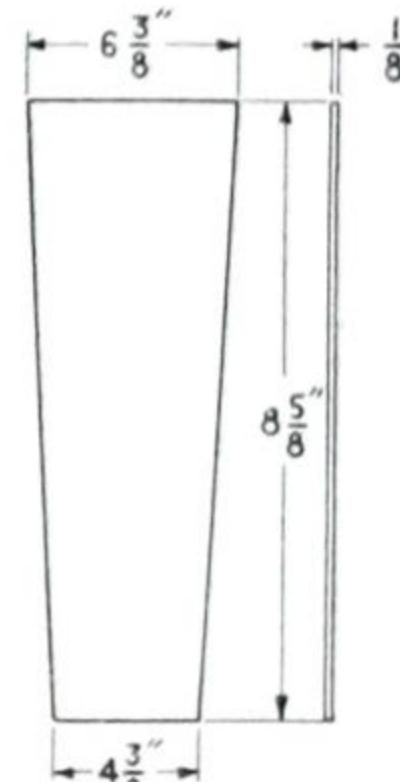


FIG. 32

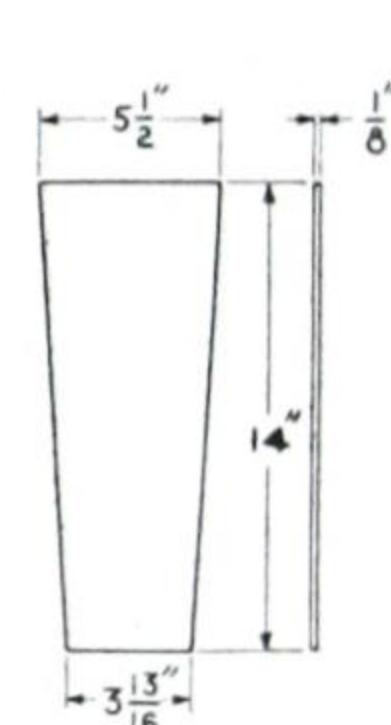


FIG. 33

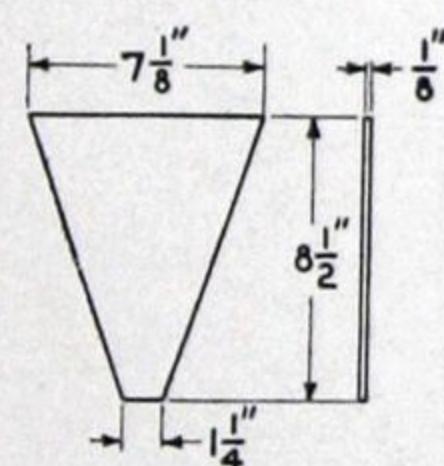


FIG. 34

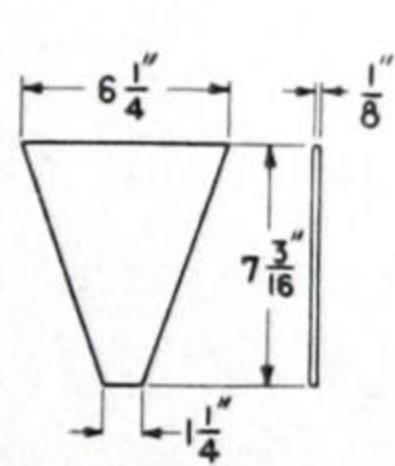


FIG. 35

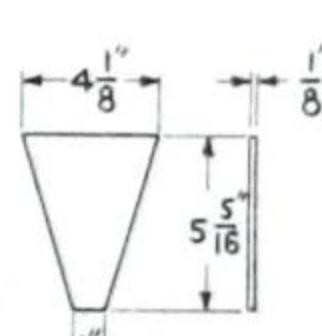


FIG. 36

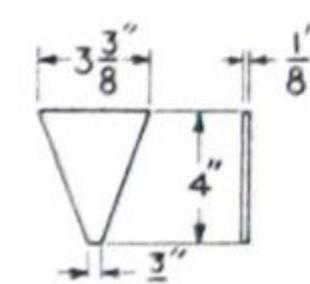
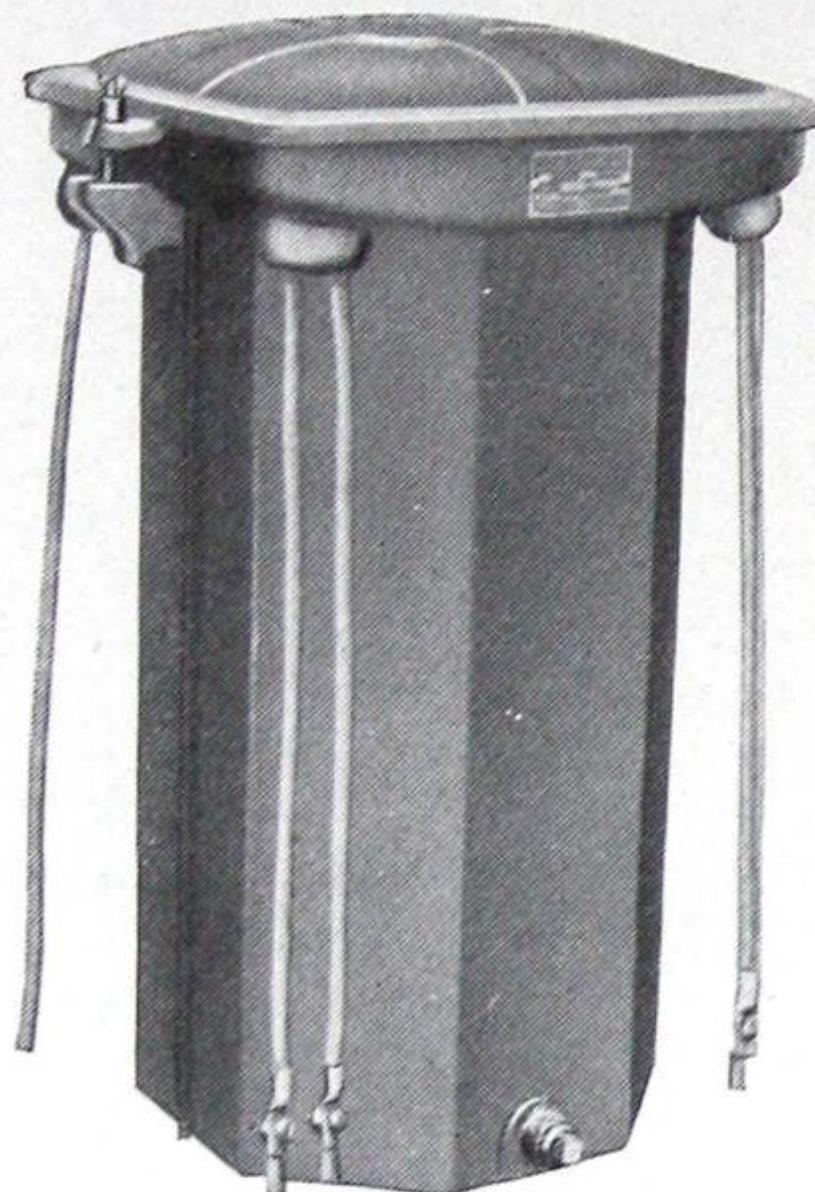


FIG. 37

Dimensions are for reference only. For official dimensions apply to the nearest district office.

**ADJUSTER SOCKET TRANSFORMERS****For 2200-Volt, 6.6-Ampere Secondary****Transformers for other voltages, frequencies and currents can be furnished on order**

TRANSFORMER FOR ADJUSTER SOCKET SYSTEM

Cap. Kv-a.	SECONDARY Min.	VOLTAGE Max.	Gallons Oil
1	81	151	3/4
2	170	303	1 3/4
3	252	454	1 3/4
5	416	756	2 1/2
7.5	625	1138	4
10	835	1515	5
15	1250	2270	8
20	1670	3030	14 1/2

Style No.	60-CYCLE TRANSFORMERS				25-CYCLE TRANSFORMERS			
	Hanger Irons	Approx. Shipping Wt., Lb.	Style No.	List Price	Approx. Shipping Wt., Lb.	Style No.	List Price	
109712	106	414607	\$ 85 00	156	414610	\$110 00		
109712	165	414608	110 00	225	275197	145 00		
109712	193	414609	130 00	260	275198	200 00		
109712	230	275191	160 00	350	275199	285 00		
109713	315	275192	210 00	500	275200	360 00		
109713	394	275193	235 00	565	275201	435 00		
109713	460	275194	290 00	748	275202	590 00		
234482	715	275195	360 00	....	....	....		

**DATA ON WESTINGHOUSE SERIES INCANDESCENT LAMPS**

Amps.	Nominal Candle Power	Total Lumens	Average Volts	Average Watts	Nominal Candle Power				Nominal Candle Power			
					Amps.	Total Lumens	Average Volts	Average Watts	Amps.	Total Lumens	Average Volts	Average Watts
6.6	60	600	6.6	43.7	15.0	400	14.8	222.0	6.6	4000	15.5	310.0
6.6	80	800	8.3	54.8	15.0	600	15.5	518.0	6.6	1000	25.9	750.0
6.6	100	1000	9.9	65.4	20.0	1000	15.5	1212.0	6.6	1500	37.5	15000
6.6	250	2500	23.1	152.5	20.0	2500	25.9	5000	6.6	2500	60.6	25000
6.6	400	4000	37.0	244.2	20.0	....	....	....	6.6	....	....	....
6.6	600	6000	54.7	361.0	....	....	....	....	6.6	....	....	....

**REACTANCE COIL REGULATOR OUTFITS****For 2200-Volt 60-Cycle Primary; 6.6-Ampere Secondary****Transformers for other voltages, frequencies and currents can be furnished on order**

The reactance coil regulator herein described is particularly useful on circuits which are remote from stations where apparatus can be housed. The outfits are especially designed for service where pole mounting and operation with a time switch is desirable. This simplifies the circuit construction and thus reduces the expense of serving outlying towns which may have constant potential feeder service for residence lighting, but for street lighting have nothing available except multiple lamps or long special series circuits from larger existing installations. They are used with the inexpensive and well-known film cutout

streethoods, no change being required in these devices.

**Construction**

The standard adjuster socket transformers are regularly used with reactance coils to make up these reactance coil regulators. These transformers are thoroughly described under the adjuster socket system. By reason of their tap arrangement, it is possible to adjust the current to within less than 1 per cent of any required value.

The reactance coils used in connection with this system are separately mounted, thus making it possible to adjust the taps conveniently, and obtain any

desired power factor and consequent protection within the range of the apparatus.

**Operation**

This system keeps the current in the series lamp circuit from rising abnormally by the use of a reactance in series with the lamp. If one lamp goes out, the impedance of the circuit is diminished by a much lower percentage because of this constant fixed reactance in series with the lamp. Consequently the larger the proportional value of reactance to lamp resistance, the closer will be the regulation with a large percentage of lamps out.

**Order by Style Number**

REACTANCE COIL REGULATOR OUTFITS—Continued

Max. Kw.	Range of Volts	TRANSFORMERS			Required Volts	REACTANCE COILS			Total Shipping Wt., Lb.	List Price
		Style No. Transformers	Style No. Hanger Irons	Gal. Oil		Style No. Reactance Coils	Style No. Hanger Irons	Gal. Oil		
<b>Rated on 80 Per Cent Power Factor</b>										
2.4	252- 454	414609	109712	1 3/4	275	406385	.....	....	310	\$230 00
4.0	416- 756	275191	109712	2 1/2	455	406385	.....	....	346	260 00
6.0	625-1138	275192	109713	4	685	412226	109713	8	665	410 00
8.0	835-1515	275193	109713	5	910	412226	109713	8	744	435 00
12.0	1250-2270	275194	109713	8	1365	412265	109713	11 1/2	990	620 00
16.0	1670-3030	275195	234482	14 1/2	1820	412265	109713	11 1/2	1245	690 00
<b>Rated on 50 Per Cent Power Factor</b>										
1.5	252- 454	414609	109712	1 3/4	395	406385	.....	....	310	230 00
2.5	416- 756	275191	109712	2 1/2	655	412226	109713	8	580	360 00
3.75	625-1138	275192	109713	4	985	412226	109713	8	665	410 00
5.0	835-1515	275193	109713	5	1310	412226	109713	8	744	435 00
7.5	1250-2270	275194	109713	8	1970	412265	109713	11 1/2	990	620 00
10.0	1670-3030	275195	234482	14 1/2	2600	412265	109713	11 1/2	1245	690 00

## REACTANCE COILS

### For 60-Cycle 6.6-Ampere Series Film-Cutout Circuits

For use in connection with Adjuster-Socket Transformers listed on a previous page to make up Reactance Coil Regulator Outfits as listed above

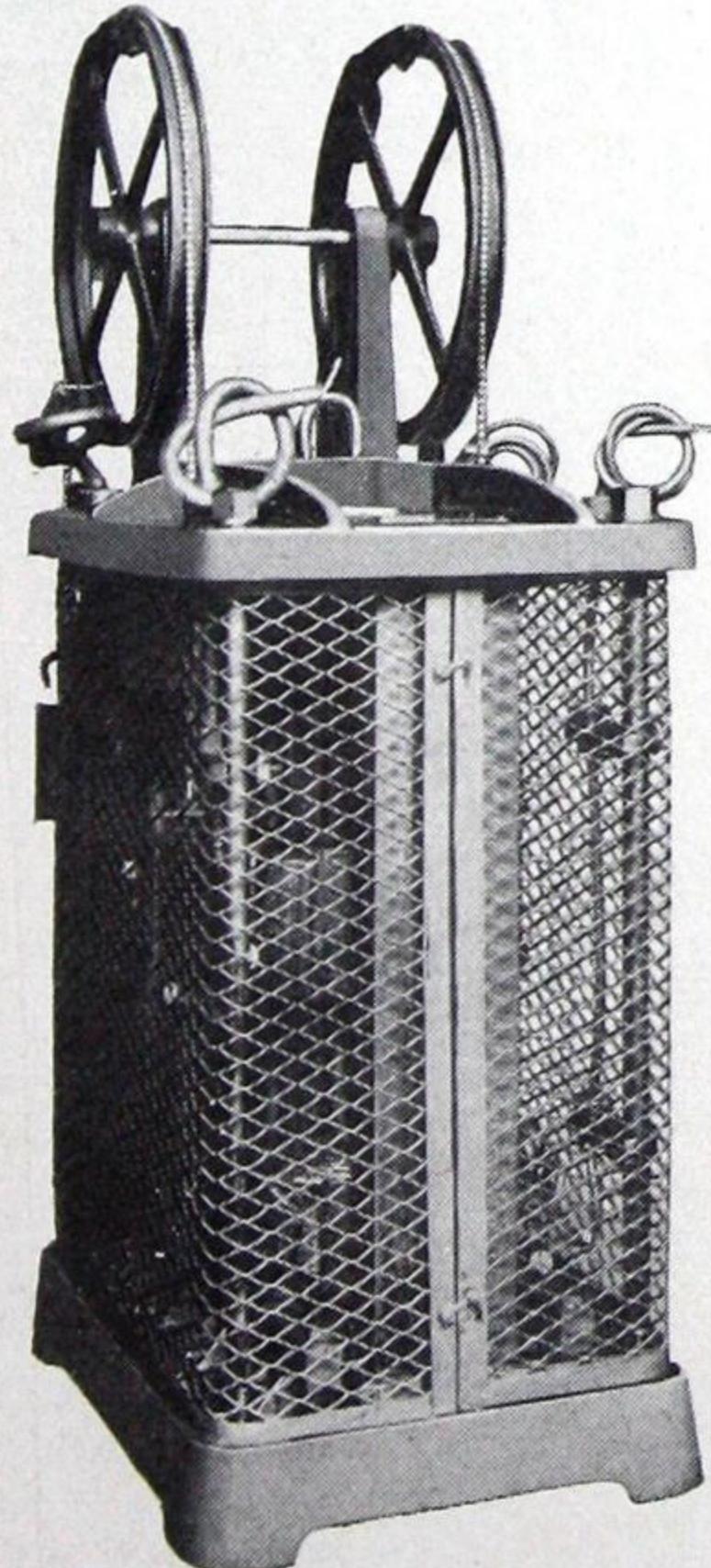
Style number includes reactance coil only. List price includes reactance coil, one pair of hanger irons and the necessary oil. When ordering, specify, by style number and description, all items included in the list price.

Maximum Kv-a.	Maximum Volts	Gallons Oil	Approx. Shipping Wt., Lb.	Style No. Hanger Irons	Style No. Coil	List Price
4.0	600	*	116	*	406385	\$100 00
8.5	1290	8	350	109713	412226	200 00
17.2	2600	11 1/2	530	109713	412265	330 00

\*Style No. 406385 is gum-filled and is mounted by lag screws—no oil or hanger irons required.

## MOVING-COIL REGULATORS AND CONTROL PANELS

### Station-Type Regulators



The moving-coil regulator depends upon the electrical repulsion existing between the primary and secondary coils of the transformer under load to produce and maintain a constant current in the secondary or lamp circuit. The regulator can be adjusted to maintain its rated secondary current under the normal conditions of load, primary voltage and frequency, regardless of the number of lamps in the circuit. The coils consist of a number of concentric sections and are known and described as ventilated coils. The individual sections consist of two layers, having one side of each conductor directly exposed to the air. No taping is used except for the protection of leads. The coils are insulated from the metal parts by Micarta tubes. These coils are most rugged and durable, withstanding heavy strains and overloads to the best advantage, and by reason of their light weight, make pos-

sible a very high sensitiveness in regulation.

The rating and performance of these regulators is based on average load conditions, consisting of an incandescent load in unity power factor and a line having 5 per cent ohmic and 10 per cent reactive drop. Their rating in kilowatts at the terminals of the regulator with unity power factor would be 9 per cent above the standard rating.

Enclosed carbon arc lamps may be operated from these regulators when equipped with a dash pot. A Westinghouse 6.6-ampere or 7.5-ampere enclosed carbon arc lamp, adjusted in accordance with the specifications requires .62 or .70 kilovolt-amperes respectively of rated regulator capacity for its operation.

The efficiency of these regulators at full load varies from 90 to 96 per cent for the various sizes. The power factor similarly varies from 83 to 86 per cent.

*Order by Style Number*

## Ornamental Street Lighting Equipment

### MOVING-COIL REGULATORS AND CONTROL PANELS—Continued

The regulator will maintain the secondary current within 2 per cent of its normal rating in the 4, 8 and 12 kilowatt sizes, or within 1 per cent on the larger sizes.

**Circuits**—The 34, 50 and 68-kilowatt sizes are arranged to operate two inter-connected circuits. To keep the load voltage to a minimum, each circuit should be of approximately one-half the capacity of the regulator. Two circuits may be operated from any regulator by the use of a two-circuit panel.

**Taps**—Primary taps are arranged for 2400, 2200 and 2000 volts. Secondary

taps are provided for 80 and 90 per cent of full load.

**Automatic operation** with a time switch is successful, if the load is such that the coil separation is not more than 2 inches. With light loads, auxiliary blocks or catches should be installed for reducing the movement of the secondary coil towards the primary coil when the power is interrupted.

#### Control Panels

Control panels of black-marine-finished slate mounted on pipe frame work are furnished.

The standard panel for single-circuit, constant-current regulators, is 16 inches by 36 inches and has mounted on it:

(a) One four-pole single-throw type I non-automatic oil circuit-breaker, which, with one operation, connects both the primary and secondary coils to their respective circuits.

(b) One alternating-current high-voltage type SM ammeter.

(c) One double-pole fuse block, (2 single-pole fuse blocks on high-capacity).

(d) Four enclosed fuses (two extra ones) mounted on the back and connected in the primary circuit. Where the working voltage of the regulator to be controlled exceeds 4000 volts, a current transformer (type KA) for the ammeter, which is connected in the secondary circuit, is furnished complete with mounting brackets.

Sub-panels for watthour meters can be supplied for any of the standard panels. These sub-panels are black-marine-finished slate, 16 inches high, mounted on the same frame as the standard panel and directly under it. Apparatus mounted thereon consists of:

(a) One type OA watthour meter.

(b) One voltage transformer.

(c) One current transformer.

(d) One double-pole fuse block with four fuses, (two extra) for the voltage transformer.

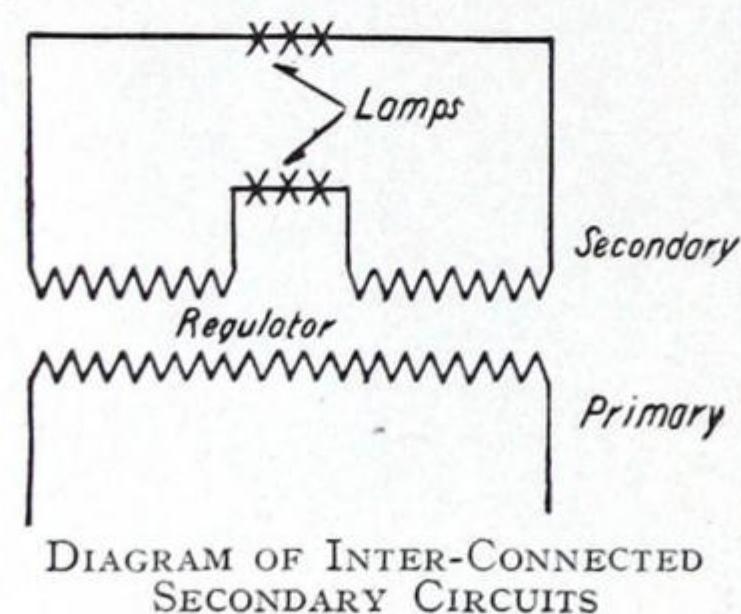


DIAGRAM OF INTER-CONNECTED SECONDARY CIRCUITS

### REGULATING TRANSFORMERS FOR 2200-VOLT PRIMARY AND 6.6—7.5\*-AMPERE SECONDARY CIRCUITS

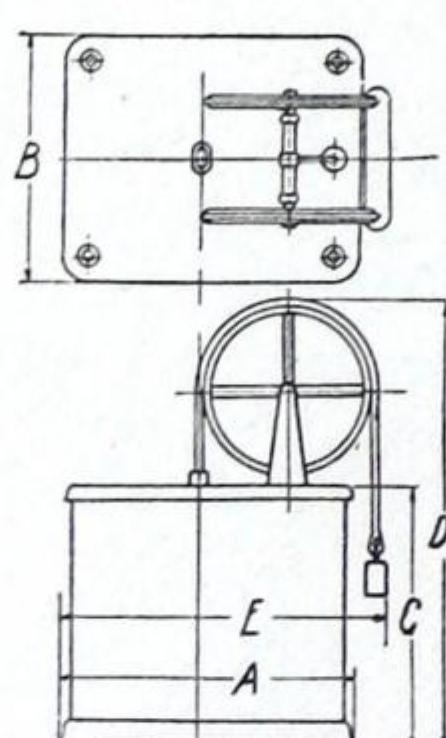
#### Transformers for other voltages, frequencies or currents can be furnished on order

60-CYCLE TRANSFORMERS		25-CYCLE TRANSFORMERS		APPROX. WEIGHT, LB. Net	List Price
Capacity Kw.	Style No.	Capacity Kw.	Style No.		
4	200599	...	...	480	\$430 00
8	200602	3	207257	685	500 00
12	200605	4.75	207260	850	600 00
17	200608	7	207263	1000	700 00
24	200611	10	207266	1250	900 00
34	416372	14	207269	1350	1050 00
50	236673	20	207272	1800	1300 00
68	326332	28	207275	2200	1750 00

Dashpot for regulator furnished at list price of \$15.00. For 4-kw. regulator, order Style No. 200740; for 8-kw. to 34-kw. regulators, order Style No. 200739; for 50-kw. and 68-kw. regulators, order Style No. 200738.

### OUTLINE DIMENSIONS IN INCHES

#### Moving-Coil Regulators



60 Cycles Kw.	25 Cycles Kw.	DIMENSIONS IN INCHES				
		A	B	C	D	E
4	....	21 5/8	17	30 1/2	50	29 1/4
8	3	23	18	33 3/8	55 1/8	31 5/8
12	4.75	25 1/8	20	33 3/4	55 1/8	32 5/8
17	7	26	21	35 1/8	57 3/8	33
24	10	28 3/4	26	25 3/8	58	34 1/2
34	14	32 1/2	29	34 7/8	55 1/2	36 3/4
50	20	34 1/4	30	36 1/4	60	40 1/4
..	28	36	32	36 1/8	63 3/4	42
68	....	36	32	41 1/8	65 3/4	42

### EFFICIENCY AND POWER FACTOR

Capacity Kw.	Max. Kv-a.	Full Load	EFFICIENCY PER CENT			PRIMARY POWER FACTOR PER CENT		
			1/4 Load	1/2 Load	1/4 Load	Full Load	1/2 Load	1/4 Load
4	4.21	91.8	90.7	86.7	73.7	90.6	85.0	56.7
8	8.64	93.9	92.9	89.8	79.4	91.8	86.0	57.3
12	12.05	94.1	93.2	90.2	80.1	91.1	85.5	57.0
17	18.15	94.7	93.9	91.1	81.8	91.3	85.5	57.0
24	25.7	95.2	94.5	92.0	83.2	91.5	85.8	57.2
34	35.8	95.5	94.9	92.6	84.4	89.9	84.3	56.1
50	53.2	96.1	95.4	93.4	86.1	89.1	83.6	55.6
68	72.0	96.3	95.7	93.7	86.8	90.1	84.5	56.4

\*Taps are provided for either 6.6 or 7.5-ampere secondary circuit.

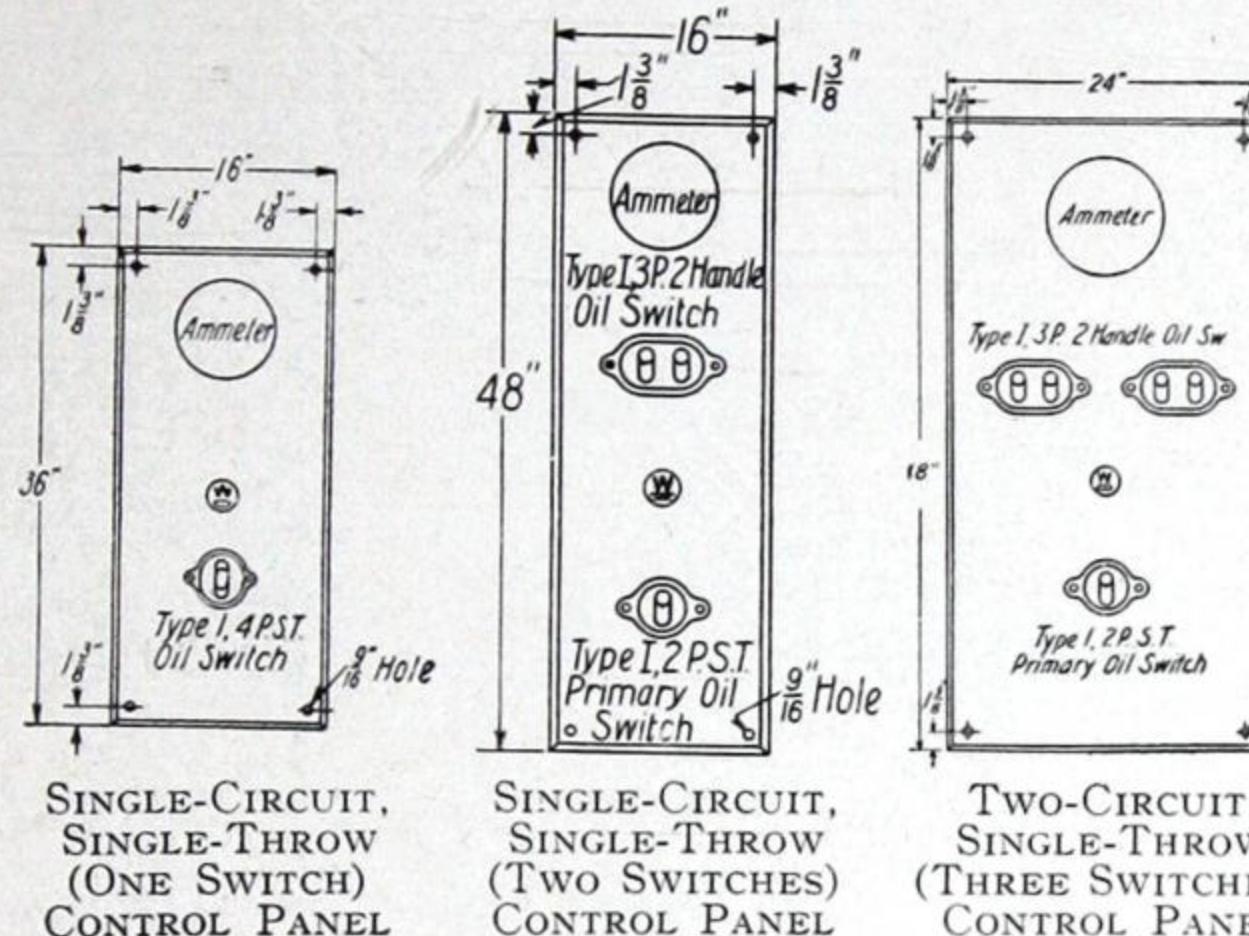
*Order by Style Number*

## MOVING-COIL REGULATORS AND CONTROL PANELS—Continued

### REGULATOR CONTROL PANELS

Description	
Single-circuit, single-throw, (1 switch) control panel for 4 kv-a. regulator.....	370647
Single-circuit, single-throw, (1 switch) control panel for 8 kv-a. regulator.....	370648
Single-circuit, single-throw, (1 switch) control panel for 12 kv-a. regulator.....	370649
Single-circuit, single-throw, (1 switch) control panel for 17 kv-a. regulator.....	370650
Single-circuit, single-throw, (2 switch) control panel for 4 kv-a. regulator .....	370651
Single-circuit, single-throw, (2 switch) control panel for 8 kv-a. regulator.....	370652
Single-circuit, single-throw, (2 switch) control panel for 12 kv-a. regulator.....	370653
Single-circuit, single-throw, (2 switch) control panel for 17 kv-a. regulator.....	370654
Single-circuit, single-throw, (2 switch) control panel for 24 kv-a. regulator.....	370655
Two-circuit, single-throw, (3 switch) control panel* for 34 kv-a. regulator.....	370656
Two-circuit, single-throw, (3 switch) control panel* for 50 kv-a. regulator.....	370657
Two-circuit, single-throw, (3 switch) control panel* for 68 kv-a. regulator.....	370658

\*Includes current transformer and mounting bracket.



Description	Style No.	Approx. Ship. Wt., Lb.	List Price
Single-circuit, single-throw, (1 switch) control panel for 4 kv-a. regulator.....	370647	300	\$160 00
Single-circuit, single-throw, (1 switch) control panel for 8 kv-a. regulator.....	370648	300	160 00
Single-circuit, single-throw, (1 switch) control panel for 12 kv-a. regulator.....	370649	300	160 00
Single-circuit, single-throw, (1 switch) control panel for 17 kv-a. regulator.....	370650	300	160 00
Single-circuit, single-throw, (2 switch) control panel for 4 kv-a. regulator .....	370651	350	200 00
Single-circuit, single-throw, (2 switch) control panel for 8 kv-a. regulator.....	370652	350	200 00
Single-circuit, single-throw, (2 switch) control panel for 12 kv-a. regulator.....	370653	350	200 00
Single-circuit, single-throw, (2 switch) control panel for 17 kv-a. regulator.....	370654	350	200 00
Single-circuit, single-throw, (2 switch) control panel for 24 kv-a. regulator.....	370655	350	200 00
Two-circuit, single-throw, (3 switch) control panel* for 34 kv-a. regulator.....	370656	450	300 00
Two-circuit, single-throw, (3 switch) control panel* for 50 kv-a. regulator.....	370657	450	300 00
Two-circuit, single-throw, (3 switch) control panel* for 68 kv-a. regulator.....	370658	450	300 00

Description	Approx. Ship. Wt., Lb.	List Price
Sub-panel for any standard panel, complete with necessary watthour meter, current and voltage transformers, fuse blocks, and fuses.....	150	\$175 00
Double-throw panels, add to above two-switch and three-switch single-throw panels.....	50 00	
Current transformer and mounting bracket for a panel when operated on regulators of over 4000 volts .....	30 00	

One-switch panel is 1 1/4 inches thick and has 1/4-inch bevel; two-switch and three-switch panels are 1 1/2 inches thick and have 3/8-inch bevel.  
Width of sub-panel is 16 or 24 inches and thickness 1 1/4 or 1 1/2 inches to match control panel.  
Dimensions are for reference only. For official dimensions apply to the nearest district office.

### POLE-TYPE REGULATORS

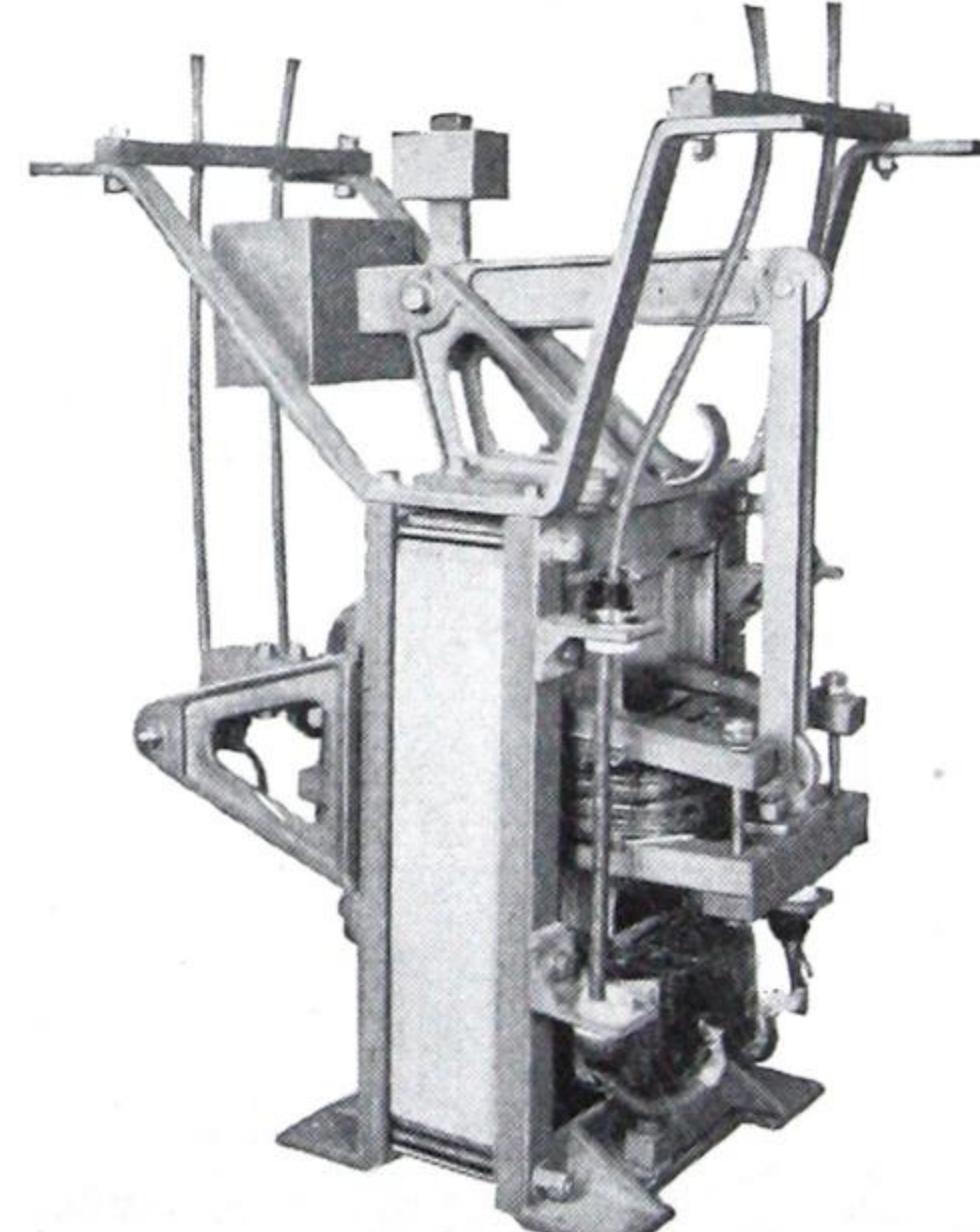
transformer case, which is mounted on the pole in the usual manner. Control is effected by means of time switches or remote control switches.

The regulator is designed for a standard primary voltage of 2300 volts, an extra tap being provided for 90 per cent of standard primary voltage. Whenever the voltage falls more than 3 per cent below normal, connections should be made to the 90 per cent tap. Regulators, unless otherwise specified, are furnished with connections made to the standard 2300 volt tap.

The standard secondary current is 6.6 amperes. Regulation is maintained within 1.5 per cent of normal, under all load conditions, from full load to short circuit. These regulators have been designed with sufficient margin to take care of 5 per cent line resistance and 10 per cent line reactance.

Two balancing weights are provided, adjustable to a right angle, so that perfect balance is obtained in all positions of the coil. Both weights are entirely above the oil and readily accessible. Set screws with lock nuts are provided to lock the weights securely in position.

Phosphor-bronze bumpers prevent the coils from striking together. Ball bearings are provided at all movable points of support. The movable coil is held

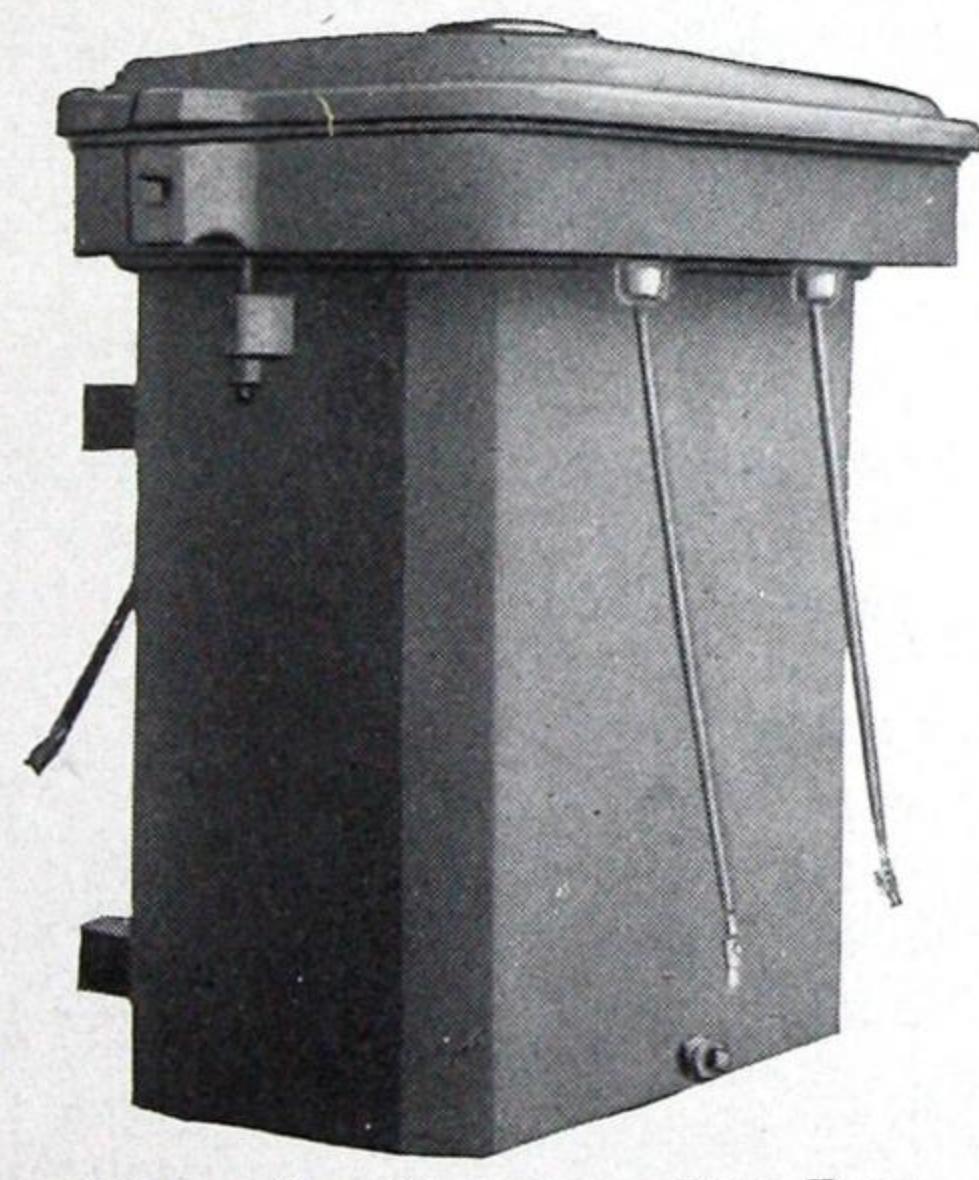


REGULATOR REMOVED FROM CASE

securely in a frame of Micarta angles.

**Oil**—Pole type regulators must operate in all weathers. To assure satisfactory performance during extremely cold weather Wemco C oil is furnished with these regulators and must be used for renewal purposes.

**Lightning protection** is essential on all overhead street lighting circuits. Type LV autovalve distribution arresters are recommended for this application. See Section 1-A.



MOVING-COIL REGULATOR, POLE TYPE

The great increase in the extent of street lighting systems requiring regulating equipment remote from the central station, has made necessary the pole-type moving-coil regulator.

This regulator with its stationary primary coil and movable secondary coil, operates upon exactly the same principle as the station-type of moving-coil regulator. Since it is usually installed in out-of-the-way places, it is necessarily automatic in operation. The working parts are enclosed in a standard

## Ornamental Street Lighting Equipment

### MOVING-COIL REGULATORS AND CONTROL PANELS—Continued

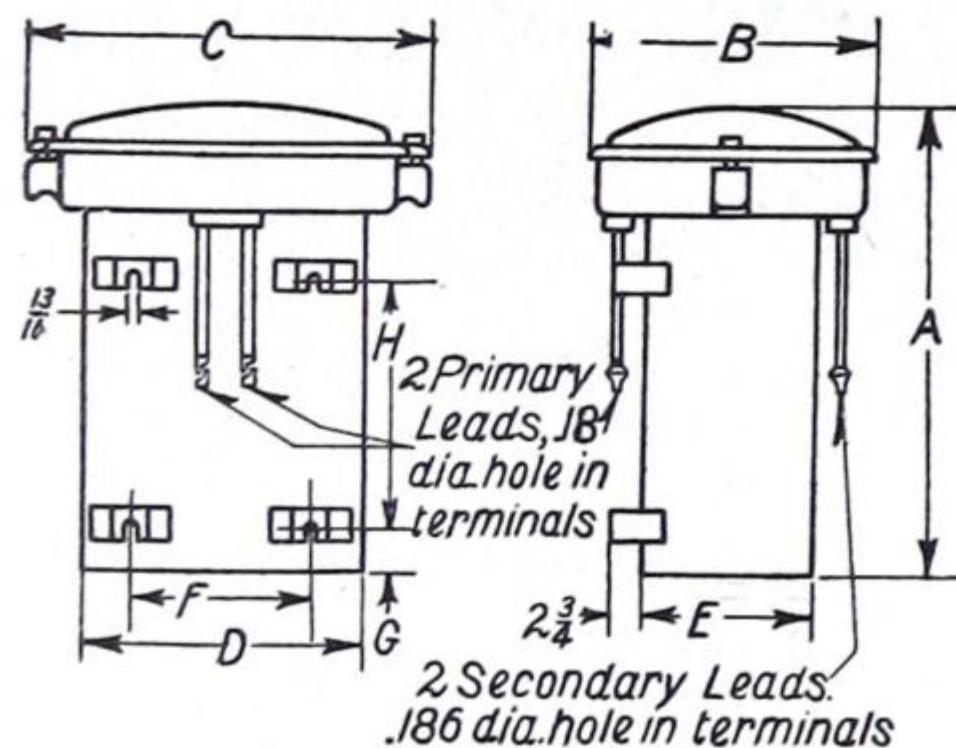
**List price** includes transformer, one set of hanger irons and the necessary oil.  
When ordering, specify separately each item included in the list price as shown below.

#### POLE-TYPE REGULATORS

Capacity in Kw.	Gallons Oil	APPROXIMATE WEIGHT, LB. Net*      Shipping†	Style No. Regulator	Style No. Hanger Irons	List Price‡
2	18	405      735	358629	109714	\$415 00
5	18	515      845	358630	109714	520 00
7½	31	600      1070	358631	129384	565 00
10	31	785      1145	358632	129384	580 00
15	58	875      1585	358633	365984	800 00
25	100	1675      2000	412053	293596	1040 00

#### EFFICIENCY AND POWER FACTOR

Capacity in Kw.	EFFICIENCY				PRIMARY POWER FACTOR			
	Full Load	¾ Load	½ Load	¼ Load	Full Load	¾ Load	½ Load	¼ Load
2	91.0	88.3	88.3	71.6	75	55	38	21
5	93.5	91.5	88.3	78.0	75	55	38	21
7½	93.5	91.6	87.8	78.3	75	55	38	21
10	85.7	94.5	92.2	85.5	75	55	38	21
15	95.5	93.8	91.2	83.7	75	55	38	21
25	95.5	93.9	91.2	83.8	75	55	38	21



#### OUTLINE DIMENSIONS IN INCHES

Capacity in Kw.	DIMENSIONS IN INCHES							
	A	B	C	D	E	F	G	H
2	34 1/4	23 1/2	33 1/4	23 3/4	14 3/4	18	3 1/2	18
5	34 1/4	23 1/2	33 1/4	23 3/4	14 3/4	18	3 1/2	18
7½	39 3/4	25	35 3/4	26 1/4	16 1/4	20 1/2	3 3/4	21
10	39 3/4	25	35 3/4	26 1/4	16 1/4	20 1/2	3 3/4	21
15	44 1/4	31	39 3/4	30 1/4	22 1/4	24 1/2	3 3/4	25
25	56	39	48	36 1/4	24 1/4	30 1/2	3	40

\*Net weight includes transformer without oil.

†Shipping weight includes transformer boxed for shipment, complete with hanger irons and oil in container.

‡Fuse blocks are not included in this price. (See Style Number Index for Style Nos. 287325 or 147190.)

§R.C.O.C. switches can be furnished for special voltages, frequencies, etc.

¶The standard regulator operates on 60-cycle circuits. Regulators for other frequencies can be furnished on order.

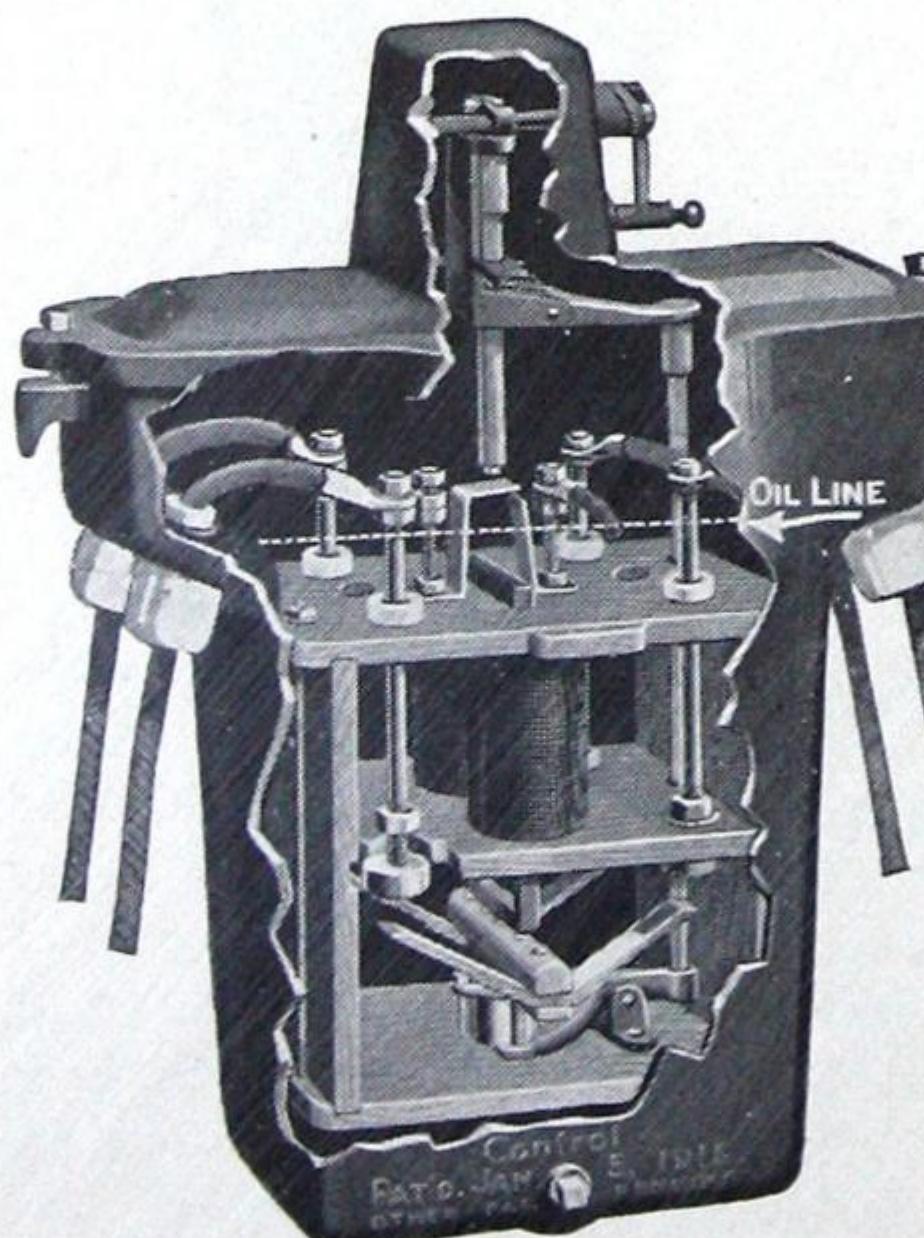
Oil weighs approximately 7 pounds net per gallon and 8 1/2 pounds shipping.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

## R.C.O.C. REMOTE-CONTROL OIL SWITCHES

### For 60-Cycle Service§

The R.C.O.C. system has been devised for the remote control of outdoor lighting. R.C.O.C. switches operate on the solenoid principle. The solenoid winding may be energized from either a series or multiple street circuit already installed.



The general practice of street lighting calls for lower intensities after midnight than before. The reduced intensities are usually obtained by turning off a number of lamps at midnight leaving others to burn all night. The use of R.C.O.C. switches makes it possible to operate long or short hour lamps on either series or multiple circuits. Besides assuring absolute automatic remote control from the power house, they effect a considerable saving in cable and control lines and conserve central station floor space in many cases.

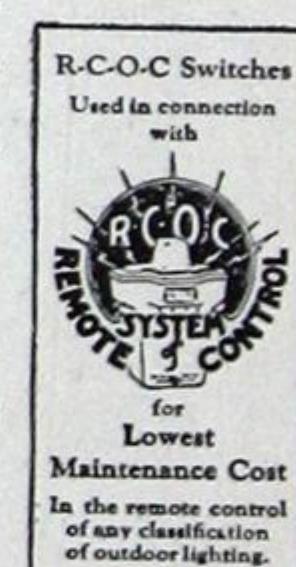
With these switches, it is possible to cascade constant-current transformers or the point of feed in a White Way lighting system. Ninety-five per cent of all outdoor lighting installations can be controlled by the R.C.O.C. system. Street lighting control problems should be referred to the nearest Westinghouse district office.

R.C.O.C. switches have no springs, require no winding, are not time clocks but are always on time.

The combination lever attachment, which is now an integral part of all R.C.O.C. switches, makes it possible by simply changing the position of a lever to close series circuits by hand in daylight to locate burnt-out lamps; close series circuits by hand at night in case the circuit should open or other trouble develop, thus avoiding outages while the circuit is being restored to normal operation; cut out of service any load; restore to normal sequence any lamp groups whose regular stepping has been thrown out of order by lightning or other such cause.

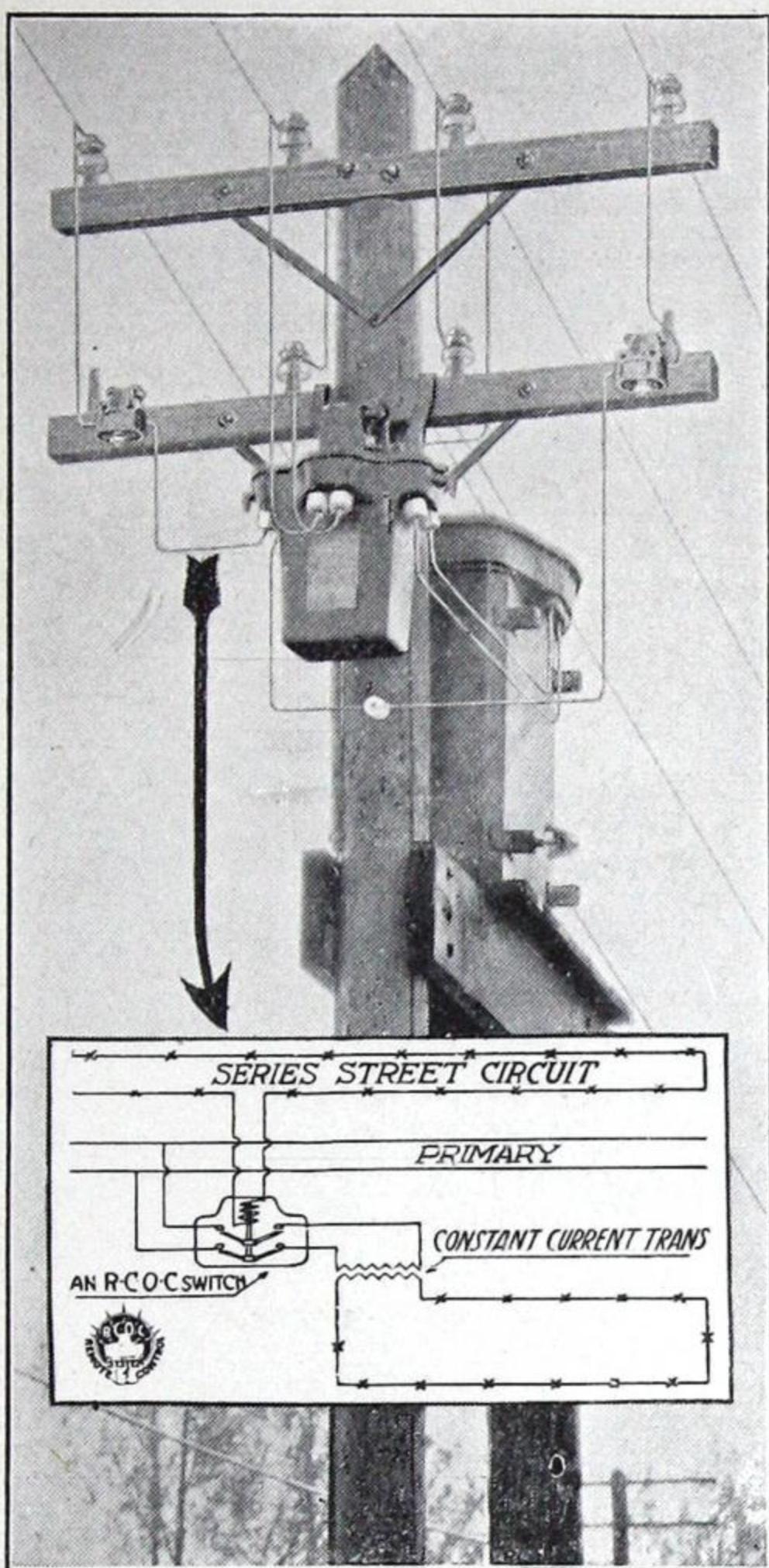
Special oil that will not congeal at a temperature of 40 degrees below zero is furnished with each switch. To assure best results no other oil should be used.

All R.C.O.C. switches are guaranteed for one year against all defects of material or workmanship and lightning burnouts.



## R.C.O.C. REMOTE-CONTROL OIL SWITCHES—Continued

### STANDARD R.C.O.C. SWITCHES—SINGLE-THROW



R.C.O.C. switches have current-carrying capacity as follows: 75 amperes per pole at 220 volts, 30 amperes per pole at 3300 volts and 15 amperes per pole at 6600 volts.

#### TYPE AN

Type AN switches are used where the load controlled is to have the same lamp hours as the solenoid control circuit.

#### Switch Energized from Series Circuit Rated in Amperes

Style No.	CONTROL CIRCUIT AMPERES		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
AN-14-S	6.6	6.6	3300	137	176	\$250 00
AN-13-S	7.5	7.5	3300	137	176	250 00
AN-14-L	6.6	6.6	6600	159	202	270 00
AN-13-L	7.5	6.5	6600	159	202	270 00

#### Switch Energized from Multiple Circuit Rated in Volts

Style No.	CONTROL CIRCUIT VOLTS		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
AN-18-L	...	110	6600	159	202	\$270 00
AN-21-L	...	220	6600	159	202	270 00
AN-26-L	110	...	6600	159	202	270 00
AN-30-L	220	...	6600	159	202	270 00

#### TYPE ANS

Type ANS switches are used as single-pole switches having four breaks under oil where the solenoid winding is energized from a multiple circuit to control the loop of a series circuit or long and short-hour lamps on a series circuit.

Style No.	CONTROL CIRCUIT VOLTS		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
ANS-18-L	...	110	6600	159	202	\$280 00
ANS-21-L	...	220	6600	159	202	280 00
ANS-26-L	110	...	6600	159	202	280 00
ANS-30-L	220	...	6600	159	202	280 00

#### TYPE MN

Type MN switches are equipped with a locking device which alternately opens and closes at the will of the power house operator by winking the solenoid control circuit.

#### Switch Energized from Series Circuit Rated in Amperes

Style No.	CONTROL CIRCUIT AMPERES		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
MN-14-S	6.6	6.6	3300	137	176	\$268 00
MN-13-S	7.5	7.5	3300	137	176	268 00
MN-14-L	6.6	6.6	6600	159	202	288 00
MN-13-L	7.5	7.5	6600	159	202	288 00

#### Switch Energized from Multiple Circuit Rated in Volts

Style No.	CONTROL CIRCUIT VOLTS		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
MN-18-L	...	110	6600	159	202	\$288 00
MN-21-L	...	220	6600	159	202	288 00
MN-26-L	110	...	6600	159	202	288 00
MN-30-L	220	...	6600	159	202	288 00

#### 2-IN-1 R.C.O.C. SWITCHES

2-IN-1 R.C.O.C. switches are used only when the load to be controlled is 600 volts or less. Two switches of the same form or a combination of the AN and MN types are contained in the same case. This conserves space in manhole and both space and weight on pole top. They are made with single pole only. The capacity of the 2-IN-1 switches is 100 amperes at 220 volts.

#### TYPE MA

The type MA switch is a combination of one AN and one MN type switch. It is equipped with a locking device operated by momentarily interrupting the solenoid control circuit. This makes it possible to discontinue certain lamps before the circuit used to energize the solenoid is discontinued.

#### Switch Energized from Series Circuit Rated in Amperes

Style No.	CONTROL CIRCUIT AMPERES		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
MA-14-L	6.6	6.6	3300	164	207	\$394 00
MA-13-L	7.5	7.5	3300	164	207	394 00

#### Switch Energized from Multiple Circuit Rated in Volts

Style No.	CONTROL CIRCUIT VOLTS		Switch Capacity	APPROX. Wt., Lb.		List Price
	D-c.	A-c.		Volts	Net	
MA-18-L	...	110	6600	164	207	\$394 00
MA-21-L	...	220	6600	164	207	394 00
MA-26-L	110	...	6600	164	207	394 00
MA-30-L	220	...	6600	164	207	394 00

# Ornamental Street Lighting Equipment

## MOVING-COIL REGULATORS AND CONTROL PANELS—Continued

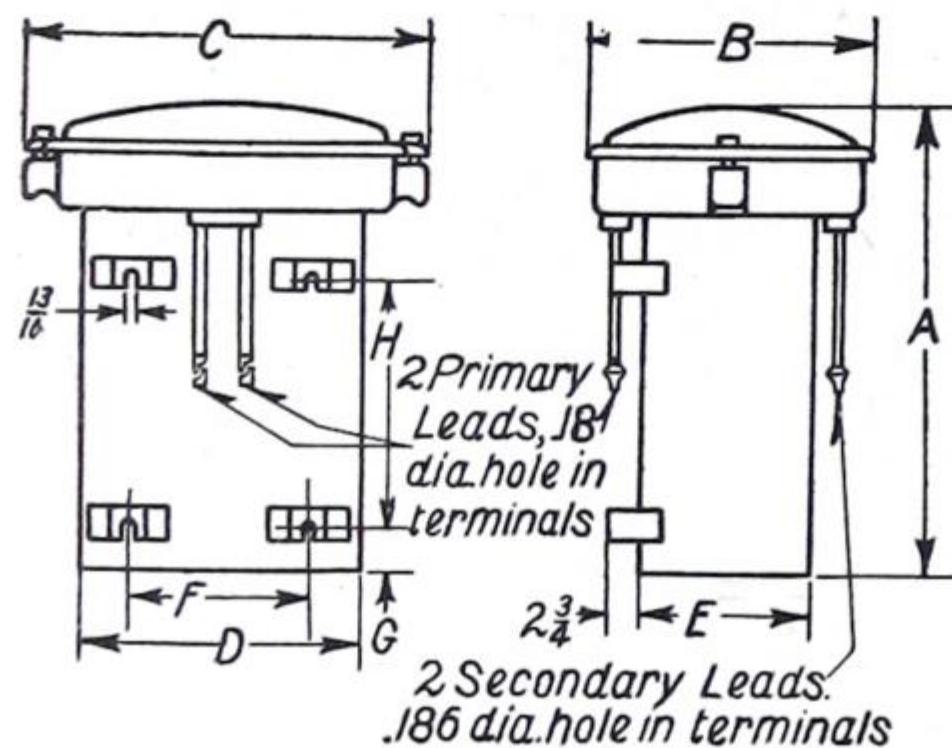
**List price** includes transformer, one set of hanger irons and the necessary oil.  
When ordering, specify separately each item included in the list price as shown below.

### POLE-TYPE REGULATORS

Capacity in Kw.	Gallons Oil	APPROXIMATE WEIGHT, LB. Net*	Shipping†	Style No. Regulator	Style No. Hanger Irons	List Price‡
2	18	405	735	358629	109714	\$415 00
5	18	515	845	358630	109714	520 00
7½	31	600	1070	358631	129384	565 00
10	31	785	1145	358632	129384	580 00
15	58	875	1585	358633	365984	800 00
25	100	1675	2000	412053	293596	1040 00

### EFFICIENCY AND POWER FACTOR

Capacity in Kw.	EFFICIENCY				PRIMARY POWER FACTOR			
	Full Load	¾ Load	½ Load	¼ Load	Full Load	¾ Load	½ Load	¼ Load
2	91.0	88.3	88.3	71.6	75	55	38	21
5	93.5	91.5	88.3	78.0	75	55	38	21
7½	93.5	91.6	87.8	78.3	75	55	38	21
10	85.7	94.5	92.2	85.5	75	55	38	21
15	95.5	93.8	91.2	83.7	75	55	38	21
25	95.5	93.9	91.2	83.8	75	55	38	21



### OUTLINE DIMENSIONS IN INCHES

Capacity in Kw.	DIMENSIONS IN INCHES							
	A	B	C	D	E	F	G	H
2	34 1/4	23 1/2	33 1/4	23 3/4	14 3/4	18	3 1/2	18
5	34 1/4	23 1/2	33 1/4	23 3/4	14 3/4	18	3 1/2	18
7½	39 3/4	25	35 3/4	26 1/4	16 1/4	20 1/2	3 3/4	21
10	39 3/4	25	35 3/4	26 1/4	16 1/4	20 1/2	3 3/4	21
15	44 1/4	31	39 3/4	30 1/4	22 1/4	24 1/2	3 3/4	25
25	56	39	48	36 1/4	24 1/4	30 1/2	3	40

\*Net weight includes transformer without oil.

†Shipping weight includes transformer boxed for shipment, complete with hanger irons and oil in container.

‡Fuse blocks are not included in this price. (See Style Number Index for Style Nos. 287325 or 147190.)

§R.C.O.C. switches can be furnished for special voltages, frequencies, etc.

¶The standard regulator operates on 60-cycle circuits. Regulators for other frequencies can be furnished on order.

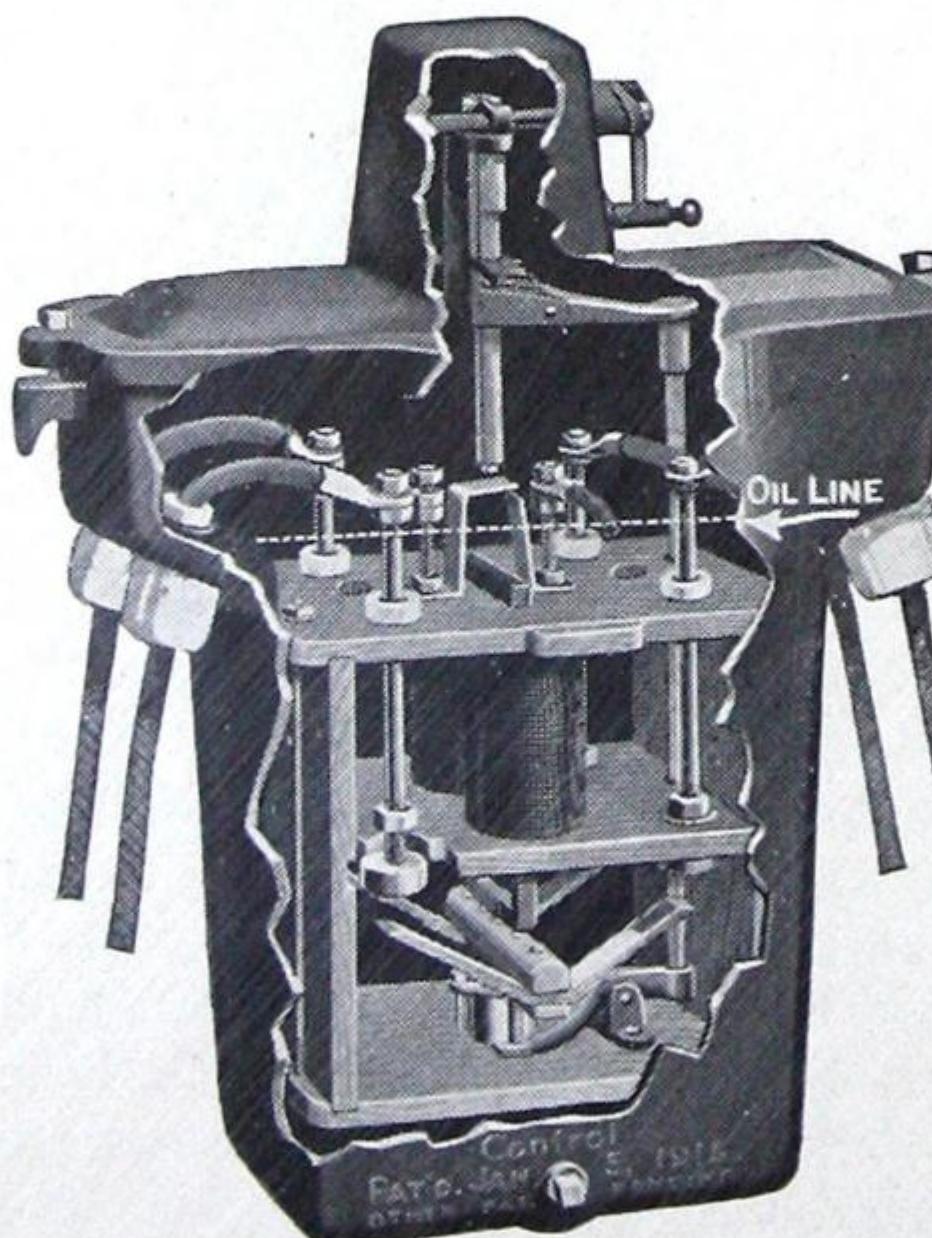
Oil weighs approximately 7 pounds net per gallon and 8 1/2 pounds shipping.

Dimensions are for reference only. For official dimensions apply to the nearest district office.

## R.C.O.C. REMOTE-CONTROL OIL SWITCHES

### For 60-Cycle Service§

The R.C.O.C. system has been devised for the remote control of outdoor lighting. R.C.O.C. switches operate on the solenoid principle. The solenoid winding may be energized from either a series or multiple street circuit already installed.



The general practice of street lighting calls for lower intensities after midnight than before. The reduced intensities are usually obtained by turning off a number of lamps at midnight leaving others to burn all night. The use of R.C.O.C. switches makes it possible to operate long or short hour lamps on either series or multiple circuits. Besides assuring absolute automatic remote control from the power house, they effect a considerable saving in cable and control lines and conserve central station floor space in many cases.

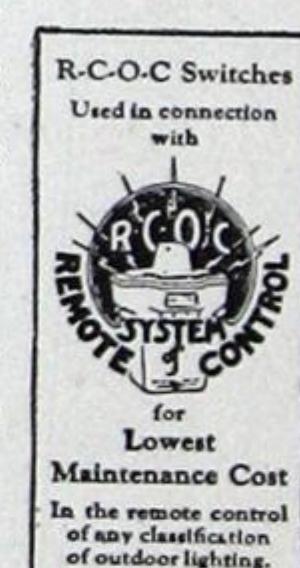
With these switches, it is possible to cascade constant-current transformers or the point of feed in a White Way lighting system. Ninety-five per cent of all outdoor lighting installations can be controlled by the R.C.O.C. system. Street lighting control problems should be referred to the nearest Westinghouse district office.

R.C.O.C. switches have no springs, require no winding, are not time clocks but are always on time.

The combination lever attachment, which is now an integral part of all R.C.O.C. switches, makes it possible by simply changing the position of a lever to close series circuits by hand in daylight to locate burnt-out lamps; close series circuits by hand at night in case the circuit should open or other trouble develop, thus avoiding outages while the circuit is being restored to normal operation; cut out of service any load; restore to normal sequence any lamp groups whose regular stepping has been thrown out of order by lightning or other such cause.

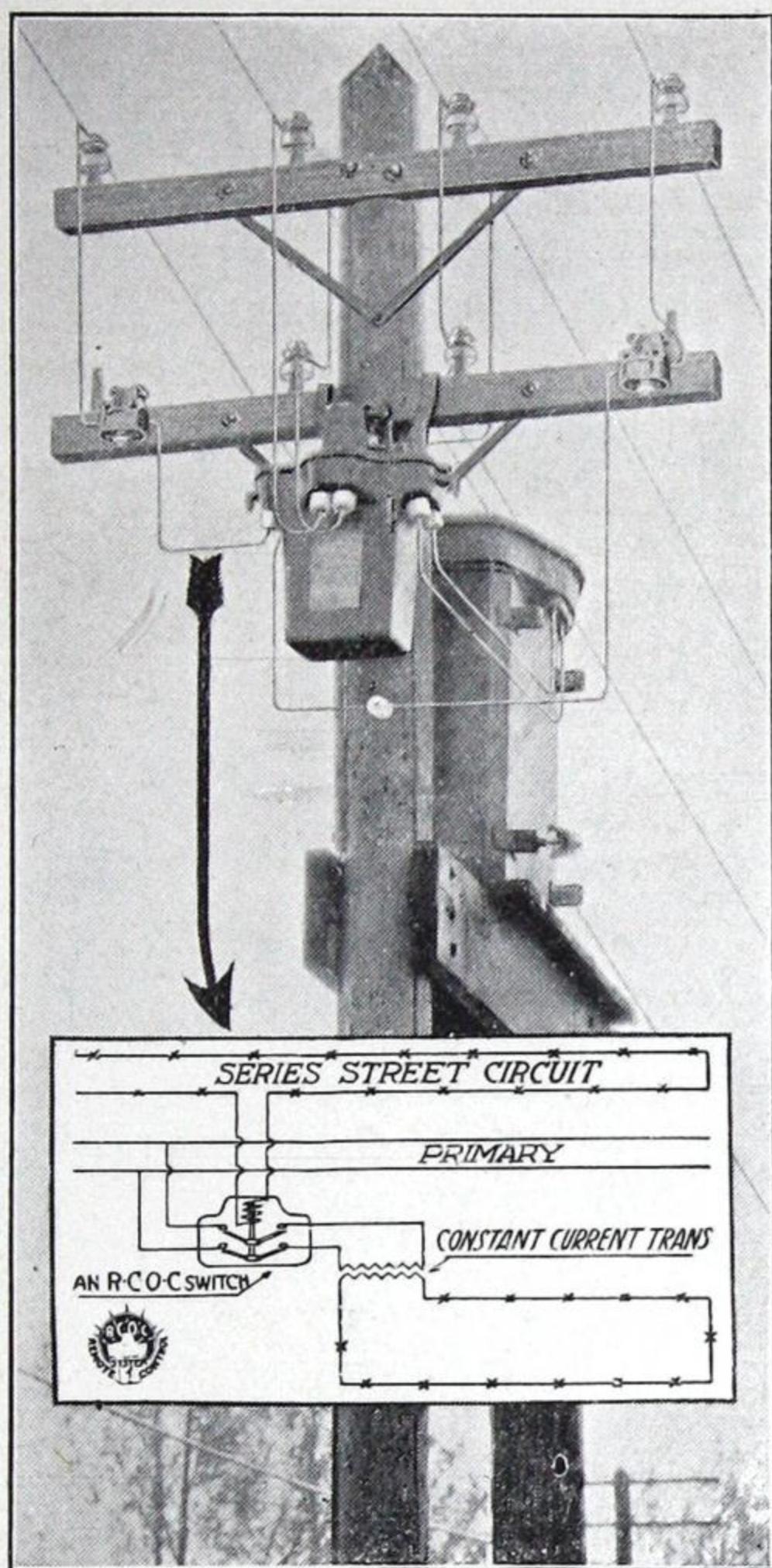
Special oil that will not congeal at a temperature of 40 degrees below zero is furnished with each switch. To assure best results no other oil should be used.

All R.C.O.C. switches are guaranteed for one year against all defects of material or workmanship and lightning burnouts.



R.C.O.C. REMOTE-CONTROL OIL SWITCHES—Continued

**STANDARD R.C.O.C. SWITCHES—SINGLE-THROW**



R.C.O.C. switches have current-carrying capacity as follows: 75 amperes per pole at 220 volts, 30 amperes per pole at 3300 volts and 15 amperes per pole at 6600 volts.

**TYPE AN**

Type AN switches are used where the load controlled is to have the same lamp hours as the solenoid control circuit.

**Switch Energized from Series Circuit Rated in Amperes**

Style No.	CONTROL CIRCUIT AMPERES	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
AN-14-S	6.6	6.6	3300	137	176	\$250 00
AN-13-S	7.5	7.5	3300	137	176	250 00
AN-14-L	6.6	6.6	6600	159	202	270 00
AN-13-L	7.5	6.5	6600	159	202	270 00

**Switch Energized from Multiple Circuit Rated in Volts**

Style No.	CONTROL CIRCUIT VOLTS	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
AN-18-L	...	110	6600	159	202	\$270 00
AN-21-L	...	220	6600	159	202	270 00
AN-26-L	110	...	6600	159	202	270 00
AN-30-L	220	...	6600	159	202	270 00

**TYPE ANS**

Type ANS switches are used as single-pole switches having four breaks under oil where the solenoid winding is energized from a multiple circuit to control the loop of a series circuit or long and short-hour lamps on a series circuit.

Style No.	CONTROL CIRCUIT VOLTS	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
ANS-18-L	...	110	6600	159	202	\$280 00
ANS-21-L	...	220	6600	159	202	280 00
ANS-26-L	110	...	6600	159	202	280 00
ANS-30-L	220	...	6600	159	202	280 00

**TYPE MN**

Type MN switches are equipped with a locking device which alternately opens and closes at the will of the power house operator by winking the solenoid control circuit.

**Switch Energized from Series Circuit Rated in Amperes**

Style No.	CONTROL CIRCUIT AMPERES	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
MN-14-S	6.6	6.6	3300	137	176	\$268 00
MN-13-S	7.5	7.5	3300	137	176	268 00
MN-14-L	6.6	6.6	6600	159	202	288 00
MN-13-L	7.5	7.5	6600	159	202	288 00

**Switch Energized from Multiple Circuit Rated in Volts**

Style No.	CONTROL CIRCUIT VOLTS	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
MN-18-L	...	110	6600	159	202	\$288 00
MN-21-L	...	220	6600	159	202	288 00
MN-26-L	110	...	6600	159	202	288 00
MN-30-L	220	...	6600	159	202	288 00

**2-IN-1 R.C.O.C. SWITCHES**

2-IN-1 R.C.O.C. switches are used only when the load to be controlled is 600 volts or less. Two switches of the same form or a combination of the AN and MN types are contained in the same case. This conserves space in manhole and both space and weight on pole top. They are made with single pole only. The capacity of the 2-IN-1 switches is 100 amperes at 220 volts.

**TYPE MA**

The type MA switch is a combination of one AN and one MN type switch. It is equipped with a locking device operated by momentarily interrupting the solenoid control circuit. This makes it possible to discontinue certain lamps before the circuit used to energize the solenoid is discontinued.

**Switch Energized from Series Circuit Rated in Amperes**

Style No.	CONTROL CIRCUIT AMPERES	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
MA-14-L	6.6	6.6	164	207		\$394 00
MA-13-L	7.5	7.5	164	207		394 00

**Switch Energized from Multiple Circuit Rated in Volts**

Style No.	CONTROL CIRCUIT VOLTS	Switch Capacity	APPROX. Wt., LB.	Net	Ship.	List Price
	D-c.	A-c.	Volts			
MA-18-L	...	110	164	207		\$394 00
MA-21-L	...	220	164	207		394 00
MA-26-L	110	...	164	207		394 00
MA-30-L	220	...	164	207		394 00

## Ornamental Street Lighting Equipment

### R.C.O.C. REMOTE-CONTROL OIL SWITCHES—Continued

#### TYPE AA

The type AA switch is a combination of two type AN switches.

##### **Switch Energized from Series Circuit Rated in Amperes      Switch Energized from Multiple Circuit Rated in Volts**

Style No.	CONTROL CIRCUIT AMPERES		APPROX. WT., LB.		List Price	Style No.	CONTROL CIRCUIT VOLTS		APPROX. WT., LB.		List Price
	D-c.	A-c.	Net	Ship.			D-c.	A-c.	Net	Ship.	
AA-14-L	6.6	6.6	164	207	\$378 00	AA-18-L	...	110	164	207	\$378 00
AA-13-L	7.5	7.5	164	207	378 00	AA-21-L	...	220	164	207	378 00
						AA-26-L	110	...	164	207	378 00
						AA-30-L	220	...	164	207	378 00

#### TYPE MM

The type MM switch is a combination of two type MN switches. It is equipped with a locking device similar to that on the type MA switch.

##### **Switch Energized from Series Circuit Rated in Amperes**

Style No.	CONTROL CIRCUIT AMPERES		APPROX. Wt., LB.		List Price
	D-c.	A-c.	Net	Ship.	
MM-14-L	6.6	6.6	164	207	\$410 00
MM-13-L	7.5	7.5	164	207	410 00

##### **Switch Energized from Multiple Circuit Rated in Volts**

Style No.	CONTROL CIRCUIT VOLTS		APPROX. Wt., LB.		List Price
	D-c.	A-c.	Net	Ship.	
MM-18-L	...	110	164	207	\$410 00
MM-21-L	...	220	164	207	410 00
MM-26-L	110	...	164	207	410 00
MM-30-L	220	...	164	207	410 00

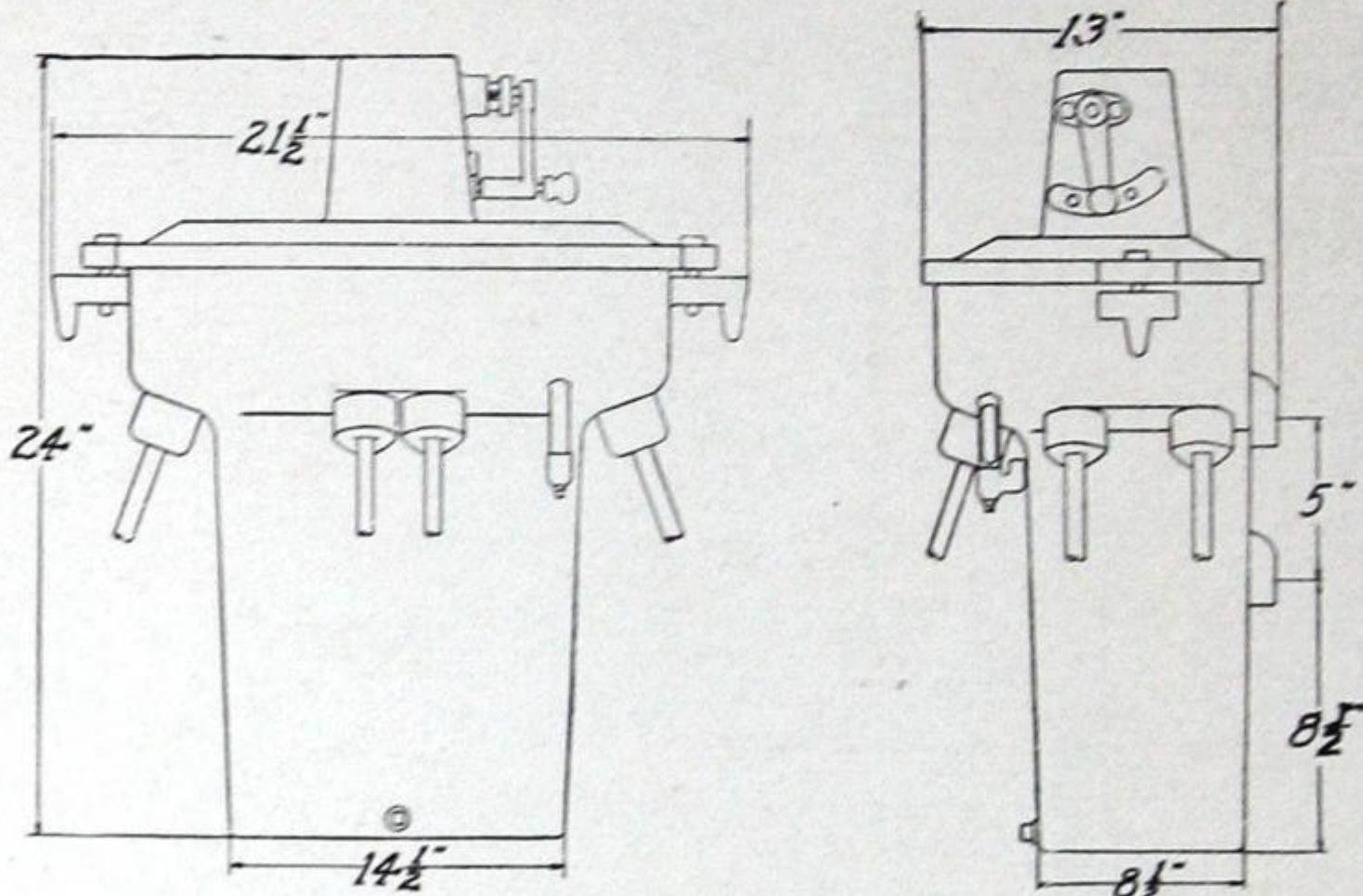
Prices include switch complete with hanger irons and oil.

For Subway type case, furnished only in large size, add \$80.00 to the list price of any switch.

All prices are f. o. b. South Bend, Indiana.

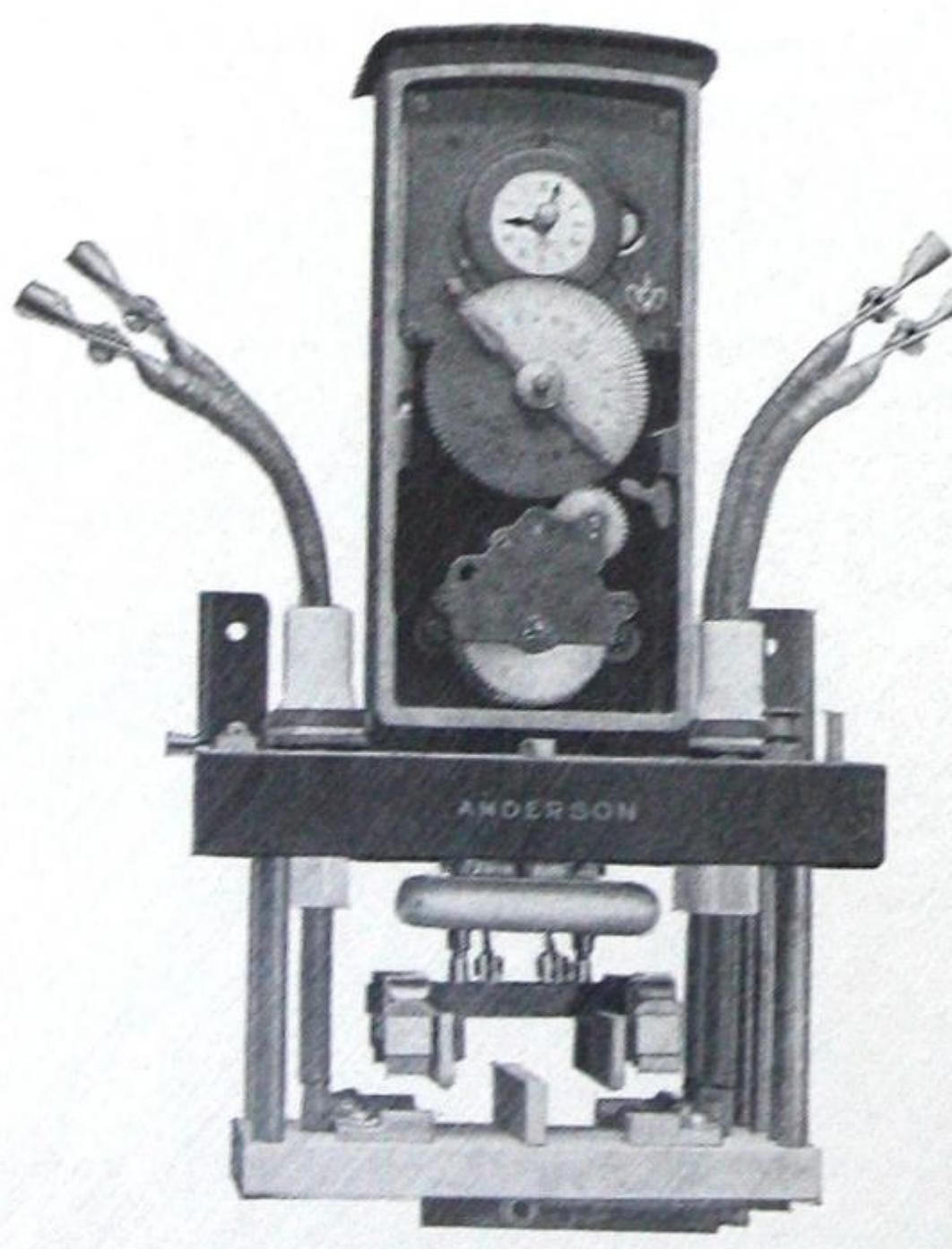
Dimensions are for reference only. For official dimensions apply to nearest district office.

#### OUTLINE DIMENSIONS IN INCHES



## TYPE L TIME SWITCHES

### Two or Three-Pole, High Tension, Oil Break



TYPE L TIME SWITCH

This type of switch is constructed for controlling alternating-current circuits up to, and including, 6600 volts, and is furnished either two or three-pole. It is an oil-break switch having a high grade propelling mechanism and time piece.

This apparatus is used extensively in connection with the pole-type, constant-current regulator, where lamps

are connected permanently to the secondary coil of the regulator.

When these switches are installed on poles, or other exposed places, additional weather protection should be provided. For this purpose a wooden housing with porcelain insulators can be supplied at \$16.00 list price, additional.

#### LIST PRICES

Style numbers and list prices cover complete apparatus, including oil chamber and sufficient oil to fill to the working level.

Capacity Amperes	Number of Poles	DIMENSIONS IN INCHES			APPROX. Wt., LB. Net	Shipping	Style No.	List Price
		Length	Width	Depth				
<b>For Potentials Not Exceeding 3300 Volts</b>								
25	2	20	10 1/2	7 1/4	44	65	W-11039	\$120 00
50	2	20	10 1/2	7 1/4	45	65	W-11040	130 00
25	3	20	14	10	50	75	W-11043	144 00
50	3	20	14	10	50	75	W-11044	160 00
<b>For Potentials Not Exceeding 6600 Volts</b>								
25	2	20	11 1/2	8	50	75	W-11080	200 00
50	2	20	11 1/2	8	50	75	W-11081	220 00
25	3	21	15	10	60	90	W-11084	240 00
50	3	21	15	10	60	90	W-11085	270 00

Type L switches operate in primary circuits only. If desired, type M switches, which operate in both primary and secondary circuits, can be supplied. Prices will be quoted upon request.

*Order by Style Number*

## AUTO-TRANSFORMERS

The demand for increased efficiencies in lighting systems led the lamp manufacturers to produce series lamps, which operate at 15 and 20 amperes. In order that these lamps might be operated on standardized series circuits of 6.6 or 7.5 amperes, auto-transformers were designed for use with each lamp. The current is taken from the line at either 6.6 or 7.5 amperes and delivered to the lamp at 15 amperes for 4000-lumen lamps and 20 amperes for 6000 and 10,000-lumen lamps. Mogul base multiple sockets should be used.

In some localities, it has been found

desirable to distribute power on low voltage multiple circuits and at the same time make use of the high current series lamps. The 6000-lumen 110 and 220-volt multiple coils listed below make this possible. They may be connected on 110 or 220-volt mains and by the selection of the proper tap, will deliver 15 or 20 amperes to the 4000 and 6000-lumen series lamp. This application, however, has certain disadvantages in that the series lamps are not regularly selected for uniformity in voltage and unless careful tests are made to determine the proper

tap on the coil for each lamp there is a possibility of considerable variation in lamp current, resulting in low efficiency or short life. However, where lamps have been especially selected for this purpose, satisfactory results have been obtained.

**Style number and list price** include bare coil without socket or mounting details. Series coils have taps for either 6.6 or 7.5-ampere line current and each coil has a tap for the next smaller lamp as well as the lamp for which it is rated. Coils are for 60 cycles. Prices for special frequencies will be furnished on request.

Lamp Lumens	Approximate Watts	Primary	Secondary	Style No.	List Price
<b>60-Cycle Auto-Transformers</b>					
4000	200	6.6-7.5 Amp.	15	250220	\$ 8 00
6000	300	10 Amp.	20	353394	10 25
6000	300	4 Amp.	20	222268	10 25
6000- 4000	300	6.6-7.5 Amp.	20-15	250221	10 25
10000	500	10 Amp.	20	348784	13 75
10000- 6000	500	6.6-7.5 Amp.	20	250222	13 75
10000- 6000	500	10 Amp.	20	409887	13 75
15000-10000	750	6.6-7.5 Amp.	20	302537	15 00
6000- 4000	300	220 Volts	20-15	302535	12 50
6000- 4000	300	110 Volts	20-15	302536	12 50
<b>25-Cycle Auto-Transformers</b>					
6000-4000	300	6.6-7.5 Amp.	20-15	229711	15 00
10000	500	6.6-7.5 Amp.	20	229712	18 00
<b>50-Cycle Auto-Transformers</b>					
6000-4000	300	6.6-7.5 Amp.	20-15	353201	13 75

## REACTANCE COILS

The single-phase reactance coils listed below are mounted in streethoods and post tops when an adjuster socket system is used to maintain constant current. The style numbers given are for 60-cycle coils, without sockets or mounting details. Prices for complete fixtures are given on other pages.

Lamp Lumens	Current Amperes	Style No.	List Price
<b>60-Cycle Reactance Coils</b>			
320-400-600	6.6	219160	\$ 8 00
800-1000	6.6	219161	9 00
2500	6.6-7.5	262293	11 00
4000	6.6-7.5	262294	13 00
2500	6.6	219164	15 00
600-800-1000	4	120375	10 00
2500	4	120377	12 00
4000	4	156052	15 00
<b>25-Cycle Reactance Coils</b>			
400-600	6.6	219164	15 00
800-1000	6.6	262293	11 00
1000	4	131320	12 00
2500	4	131322	15 00

*Order by Style Number*

## SAFETY COILS

**For Indoor and Outdoor Service on Series A-c. Circuits**

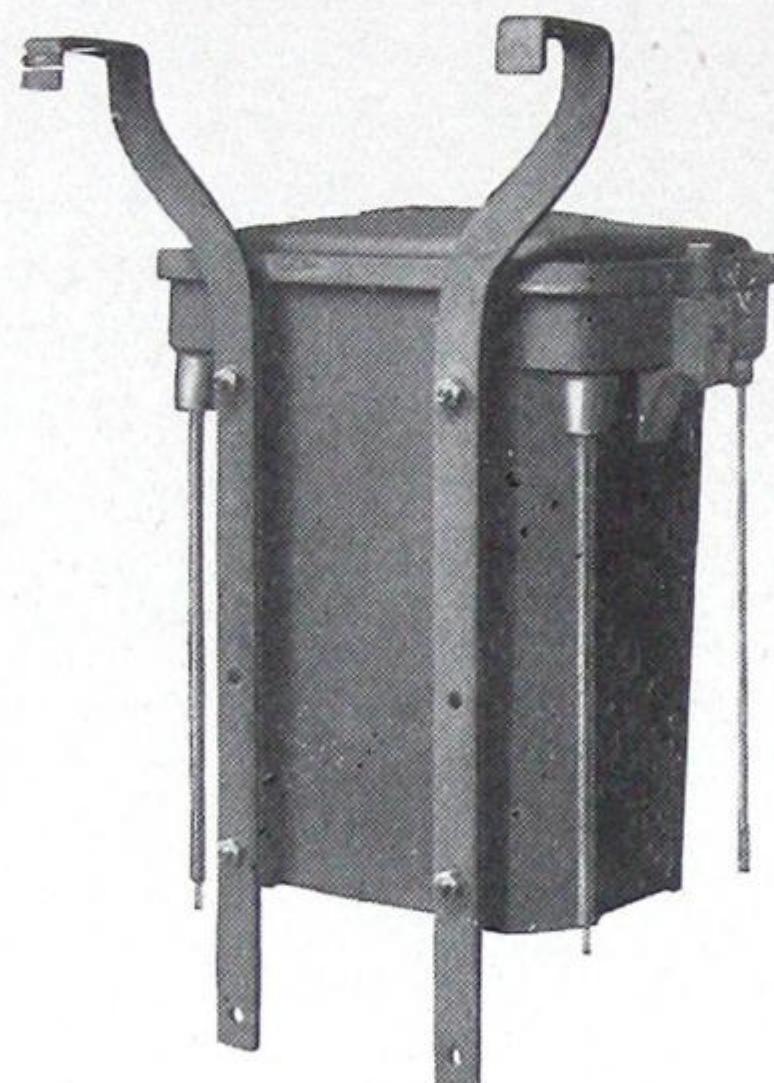


FIG. 1—REAR VIEW OF TYPE SK (OIL-INSULATED TYPE) SHOWING METHOD OF ATTACHING HANGER IRONS

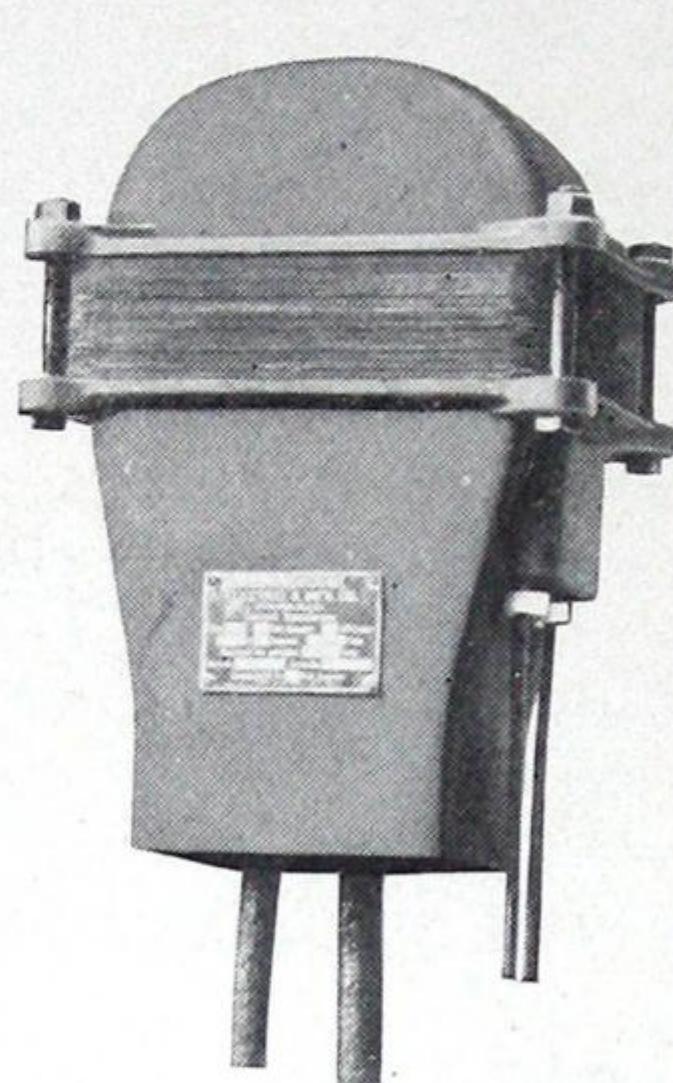


FIG. 2—TYPE MA (DRY-TYPE  
½ AND 1 KV-A.)

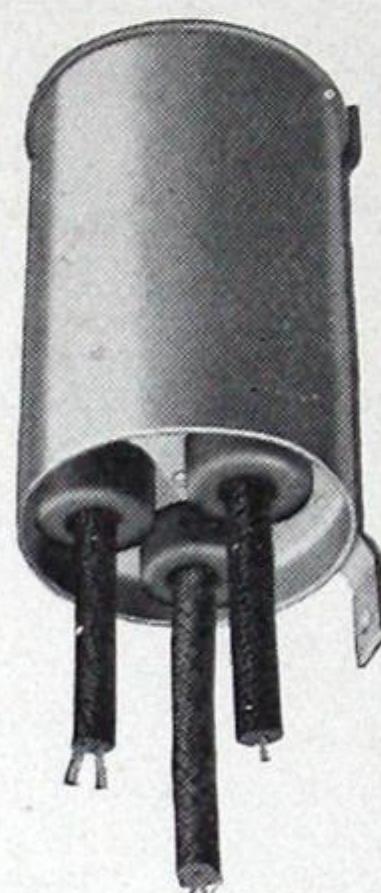


FIG. 3—SAFETY COILS IN SHEET-STEEL CASE (GUM-FILLED)



FIG. 4—SAFETY COILS IN SHEET-STEEL CASE (GUM-FILLED)

It is often desirable to make an installation of lamps where the potential of the series arc or incandescent circuit—the only circuit available—is too high for the application in question and the cost of running a multiple circuit from the central station would be prohibitive.

For such a proposition, Westinghouse safety coils are the economical solution. They are especially useful on installations as follows:

1—Where a series lighting system is desirable but high potentials are impracticable:

- (a) On side streets or alleys where to run the main series circuit would require a new pole line. The comparatively low voltage safety-coil circuit can often be run on an existing telephone pole line.
- (b) On bridges and in subways where the high potential of the regular series circuit is prohibitive.
- (c) For lighting of fire-alarm, police and letter boxes, where high potentials so near the ground would be dangerous.

2—Where a few lamps are wanted in a building and a multiple circuit is not available.

3—Where large lamps of high current must be operated from high-voltage series circuits such as white-way posts

and pendent fixtures on mast arms having long loops.

### **Operation**

The primary of these coils is connected in the regular series circuit, while the secondary supplies the lower potential series circuit. Regular series lighting fixtures (such as those with film-cutouts) should be used, except where the secondary voltage does not exceed 200 volts, in which case the puncturing of films is unreliable and multiple sockets may be used.

Safety coils of 2 kilowatts and less may be operated continuously on open circuit without injury; those of larger size will operate two hours without injury.

**Film Protective Device**—To prevent damage in case of an accidental open circuit in the secondary winding, a film protective device is recommended. This device is equipped with a film which, when connected across the secondary terminals of the safety coil, punctures under the open circuit voltage and thereby establishes a short circuit.

### **Construction**

These safety coils are series transformers insulated for high voltages (being tested for 20,000 volts for one minute between windings and between windings and iron).

**In Sheet-Steel Case**—The safety coils of 500 watts or less are of the core-type construction with a case of sheet-steel, gum-filled. For manhole service, outlets of a heavy pipe are provided, so tinned that a joint with lead-covered cable may be wiped to them. Small feet or mounting straps for supporting the transformer in the base of the hole are conveniently arranged. For overhead service, the leads are brought out through the bottom in porcelain bushings and a strap is provided on the side for mounting on a pole.

**Type MA (Dry-Type)**—The 1 and 2 kilowatt size are air cooled and of the same construction as the type MA current transformers. The magnetic circuit, with laminations exposed to the air, is clamped between cast-iron end-caps which protect the windings, the leads extending downwards through suitable bushings in the bottom end-cap. The coils are impregnated with an insulating compound which thoroughly seals up joints between the laminations and end-caps.

**Type SK (Oil-Insulated)**—The larger capacities of these coils are oil-insulated and have the same form of construction as the type SK distribution transformers (see "Section 4-A Distribution Transformers").

## SAFETY COILS—Continued

Style number and list price include safety coil and (for the oil-insulated) the necessary oil and hanger irons for pole mounting.

### FOR 6.6-AMPERE CIRCUITS, LINE VOLTAGE OF 10,000

Capacity Kv-a.	Lamp Lumens	Fig. No.	Secondary Amperes	Secondary Volts	APPROX. Wt., LB. Net	Wt., LB. Shipping	Style No. Hanger Irons	Gal. Oil	Style No.	List Price
<b>In Sheet-Steel Case (Gum-Filled)</b>										
.075	.....	3	6.6	11	18	38	.....	....	352320	\$25 00
.450	.....	3	6.6	68	28	48	.....	....	352321	42 00
.220	4000	3	15	14.8	20	40	.....	....	352322	28 00
.316	6000	3	20	15.5	28	48	.....	....	352323	30 00
.518	10000	3	20	25.9	30	50	.....	....	352324	41 00
.816	15000	3	20	37.5	35	55	.....	....	352443	45 00
1.30	25000	3	20	60.6	40	60	.....	....	352444	48 00
.075	.....	4	6.6	11	18	38	.....	....	352325	25 00
.450	.....	4	6.6	68	28	48	.....	....	352326	42 00
.220	4000	4	15	15.3	20	40	.....	....	352327	28 00
.316	6000	4	20	15.5	28	48	.....	....	352328	30 00
.518	10000	4	20	25.9	30	50	.....	....	352329	41 00
.816	15000	4	20	37.5	35	55	.....	....	352330	45 00
1.30	25000	4	20	60.6	40	60	.....	....	352331	48 00
<b>Type MA (Dry-Type)</b>										
1.00	.....	2	6.6	152	56	65	.....	....	249428	65 00
2.00	.....	2	6.6	304	93	110	.....	....	249430	83 00
<b>Type SK (Oil-Insulated)</b>										
5.00	.....	1	6.6	760	230	333	109713	8	249433	145 00
10.00	.....	1	6.6	1520	346	508	109713	11½	249435	230 00

### OUTLINE DIMENSIONS IN INCHES

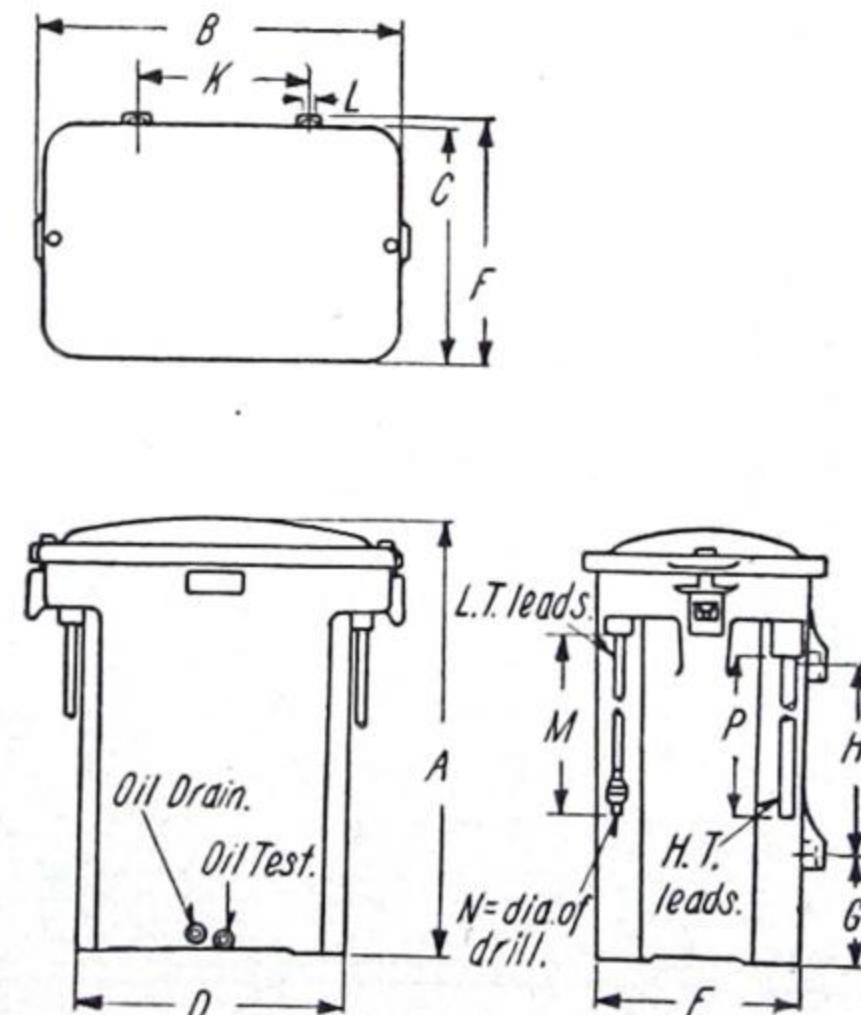
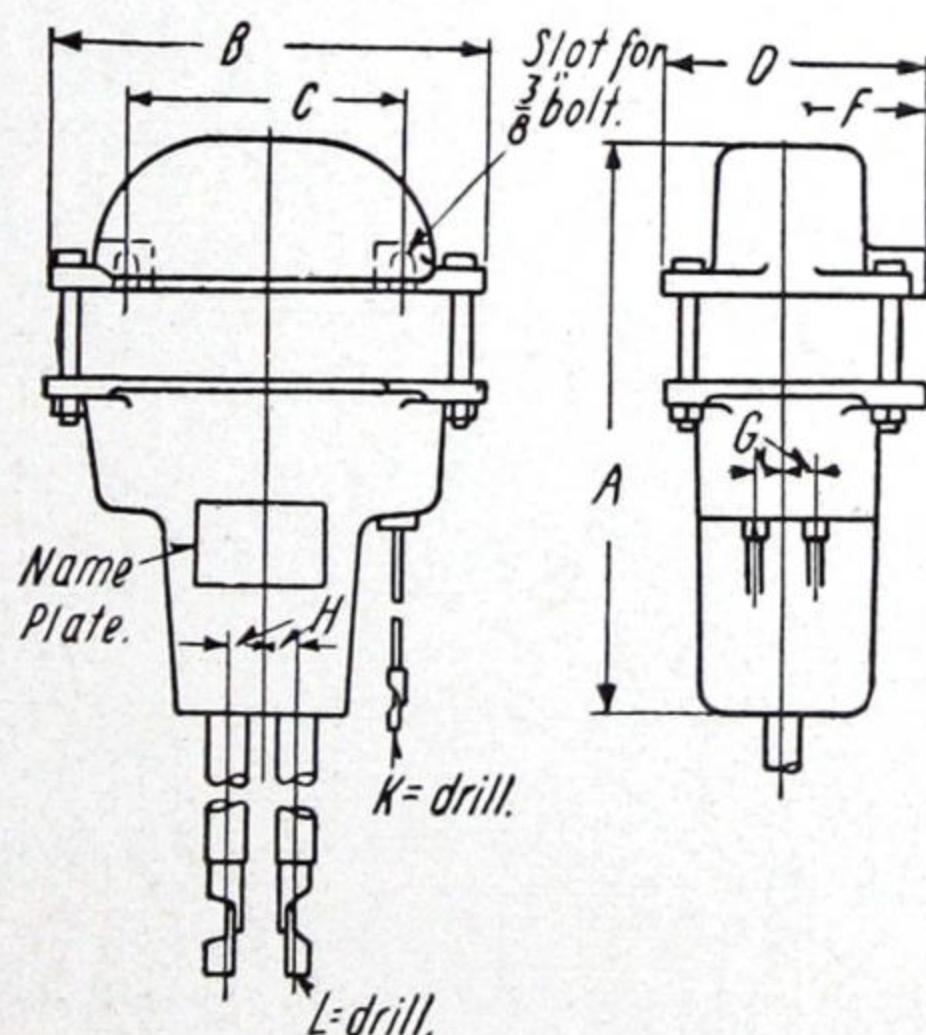


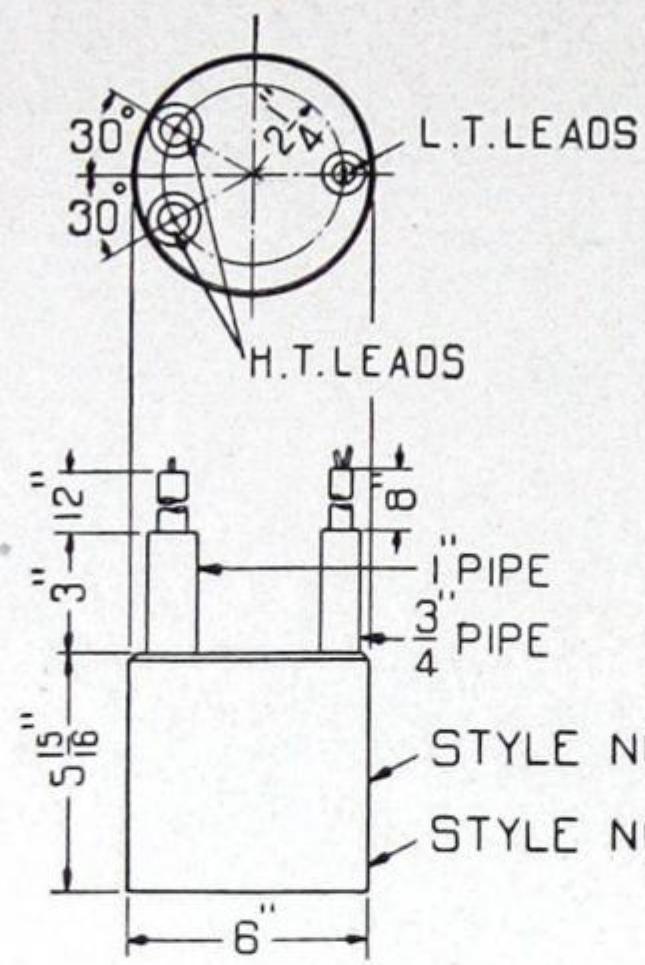
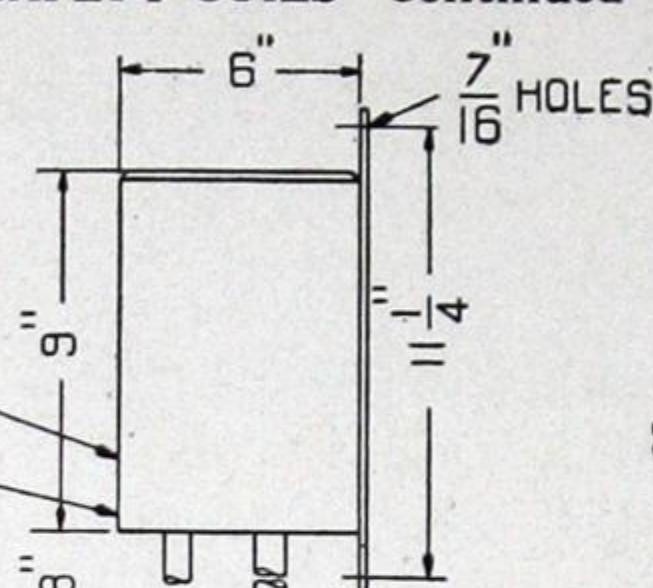
FIG. 5

FIG. 6

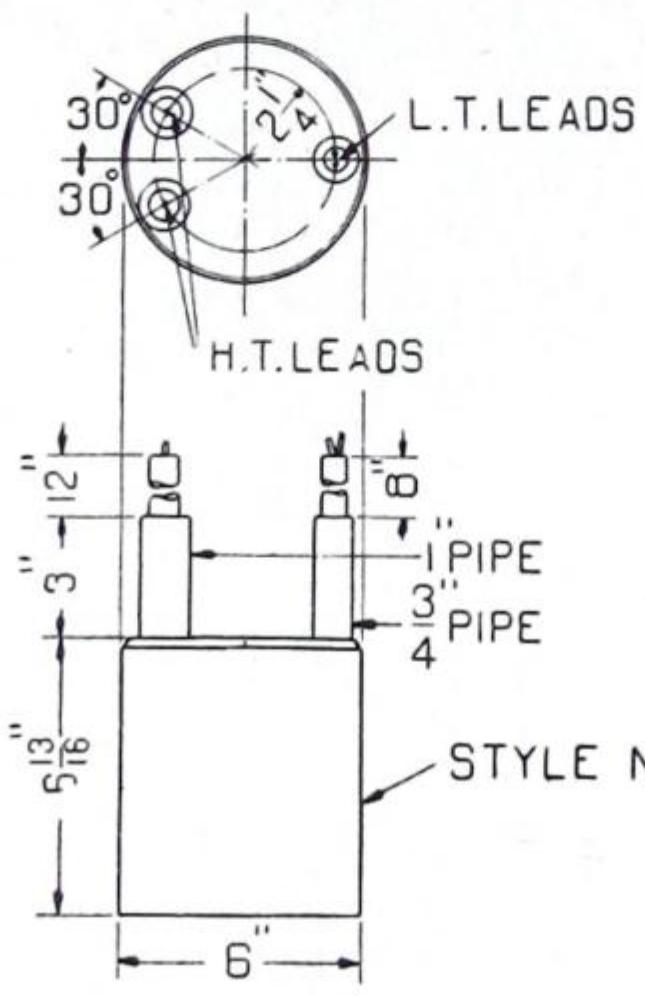
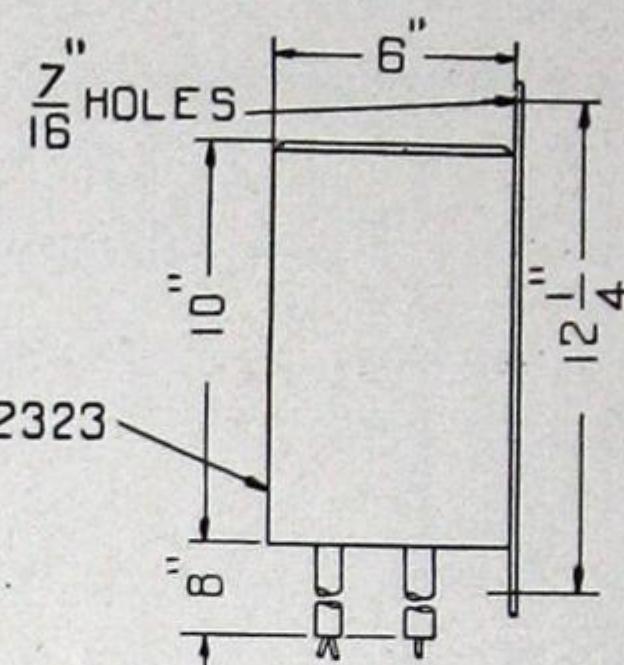
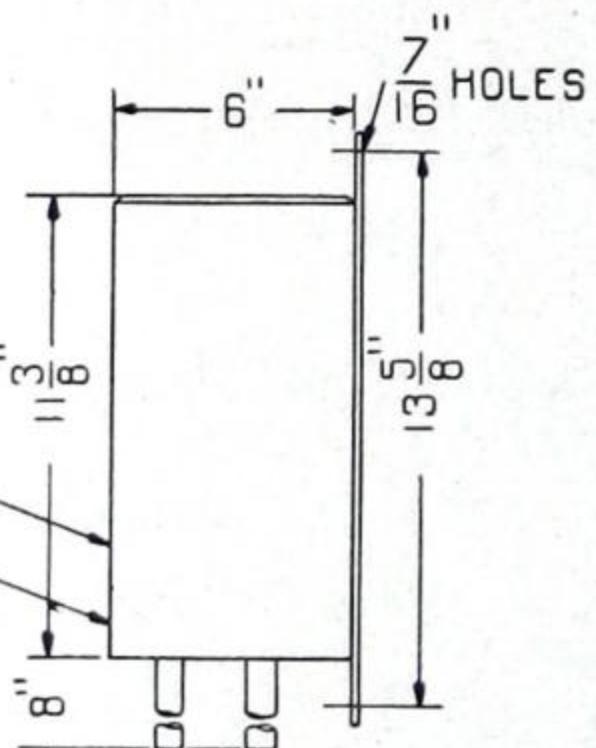
Style No.	Kv-a.	Fig. No.	DIMENSIONS IN INCHES											
			A	B	C	E	F	G	H	K	L	M	N	P
249428	1	5	15 15/16	9 13/16	6 1/8	5 15/16	....	3 1/8	5/8	3/4	5/32	1/4	....	..
249430	2	5	15 1/2	11 1/4	7 7/8	7 13/16	....	4 1/2	3/4	3/4	5/32	1/4	....	..
249433	5	6	23 1/8	19 3/4	12 5/8	14 1/4	10 7/8	13	6 1/8	10	9	1/16	18	168 24
249435	10	6	25 1/2	22 3/8	14 7/8	15 3/4	12 7/8	15 1/4	3 3/8	16	11	1/16	21	168 24

Dimensions are for reference only. For official dimensions apply to the nearest district office.

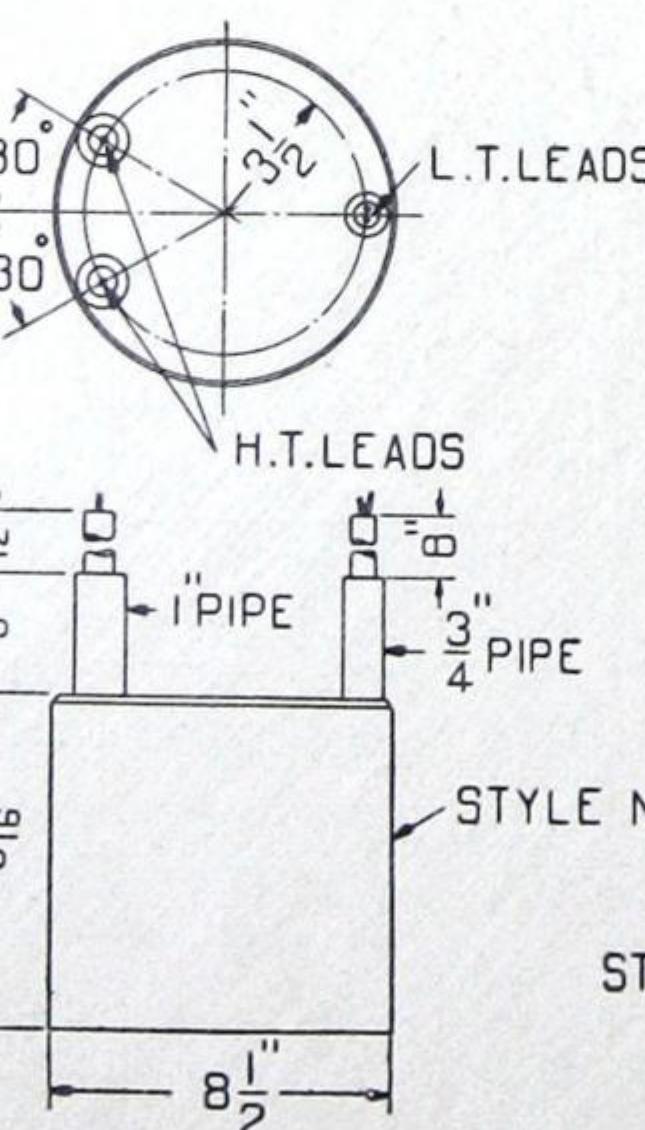
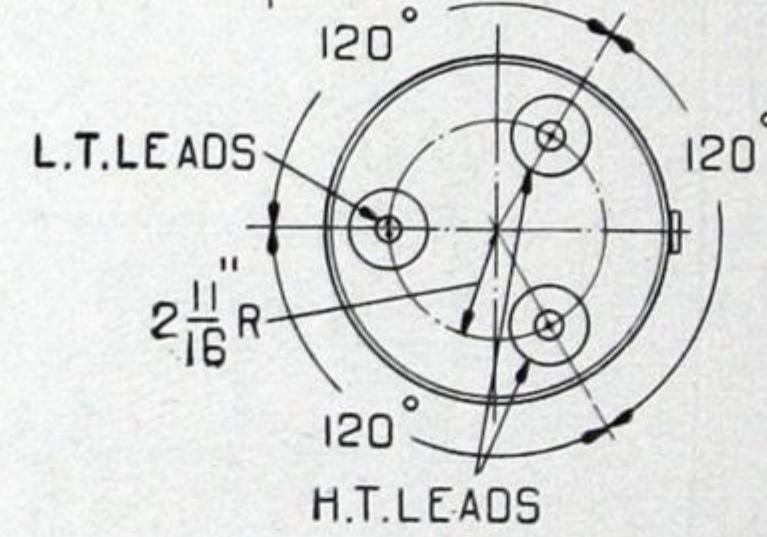
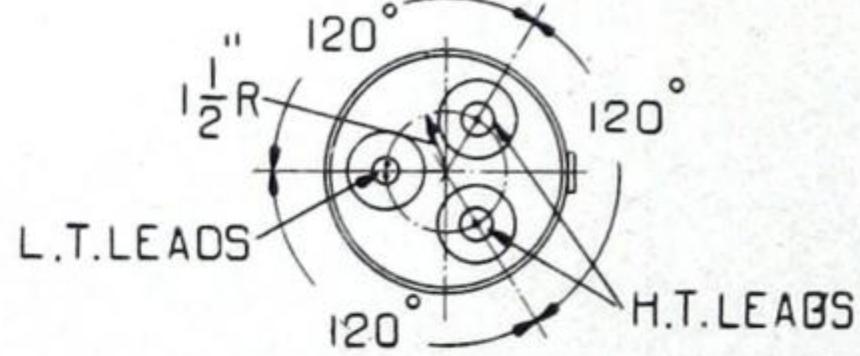
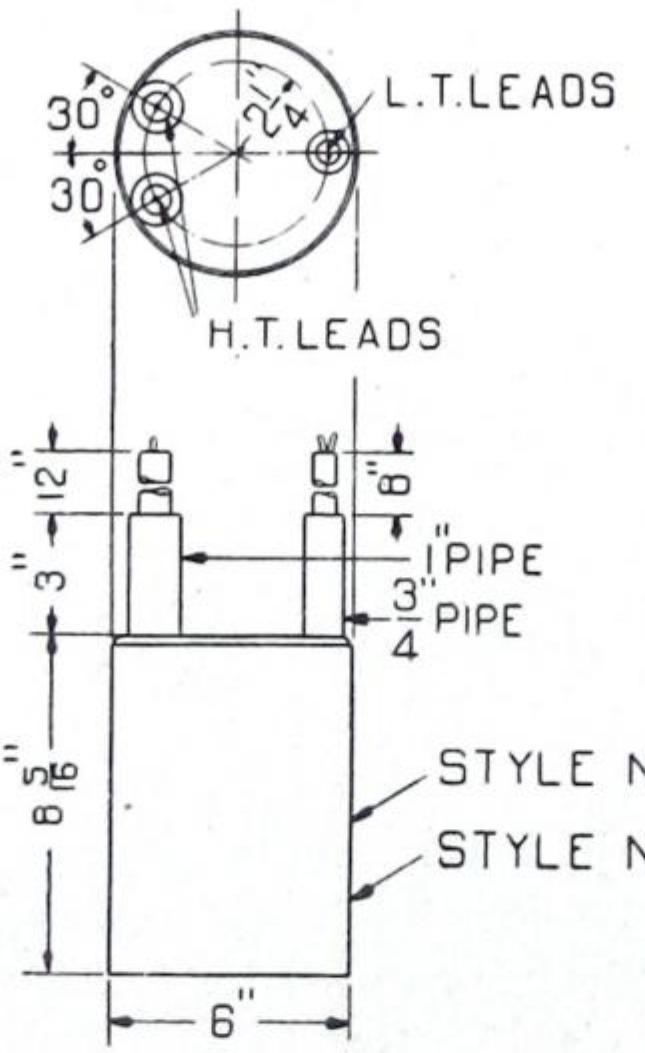
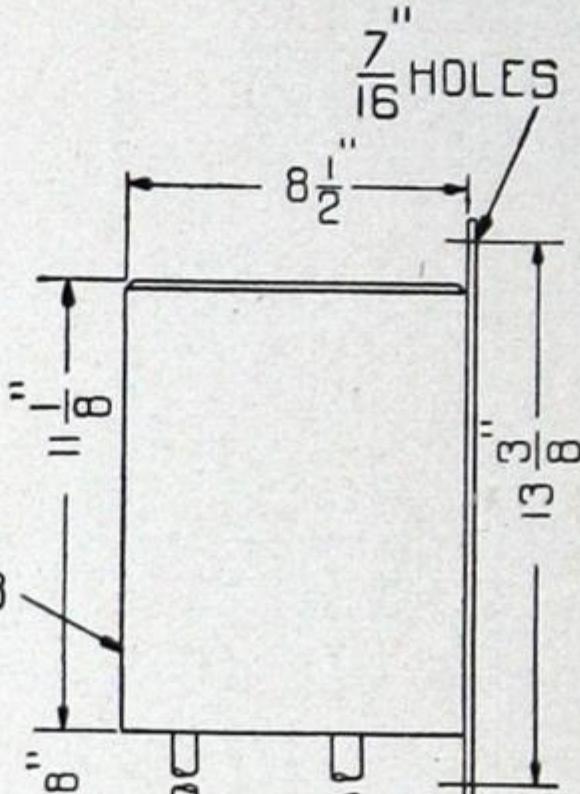
*Order by Style Number*

*Ornamental Street Lighting Equipment***SAFETY COILS—Continued**STYLE NO. 352320  
STYLE NO. 352322

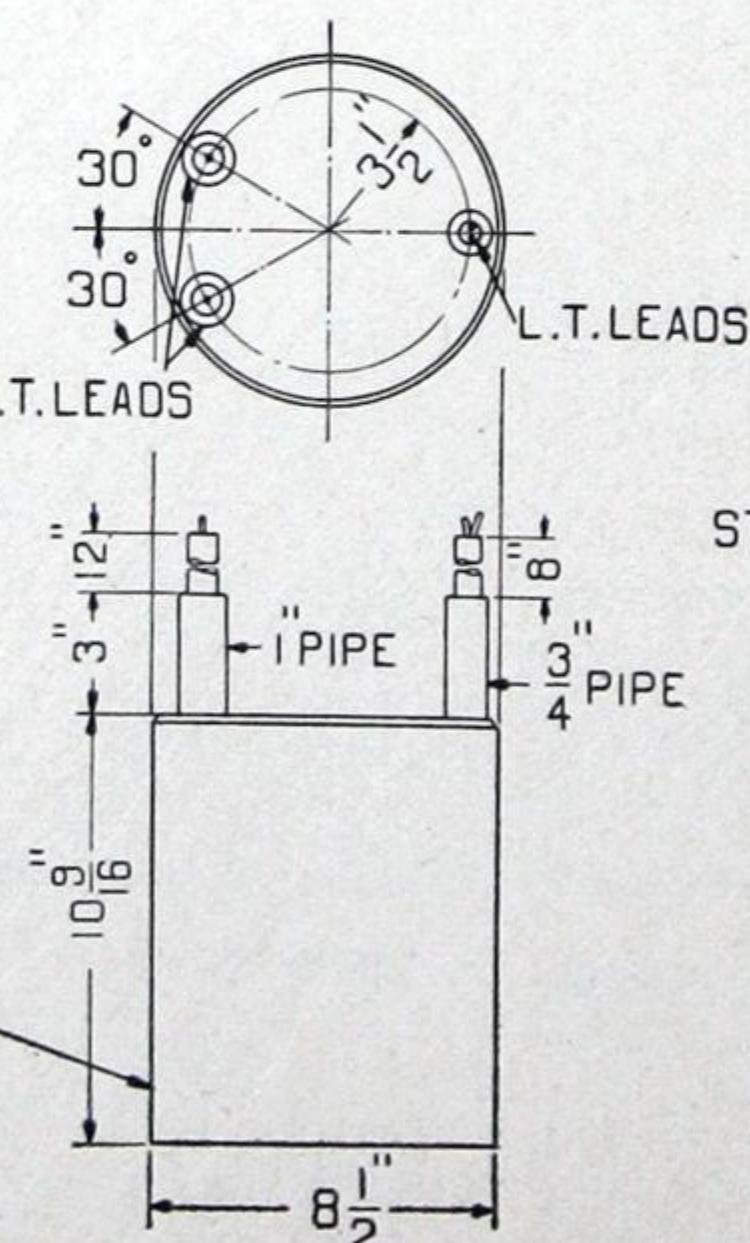
STYLE NO. 352323

STYLE NO. 352321  
STYLE NO. 352324

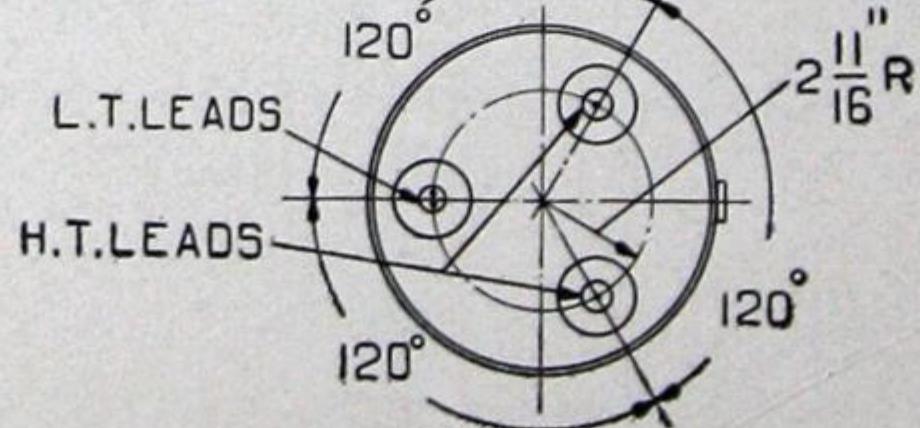
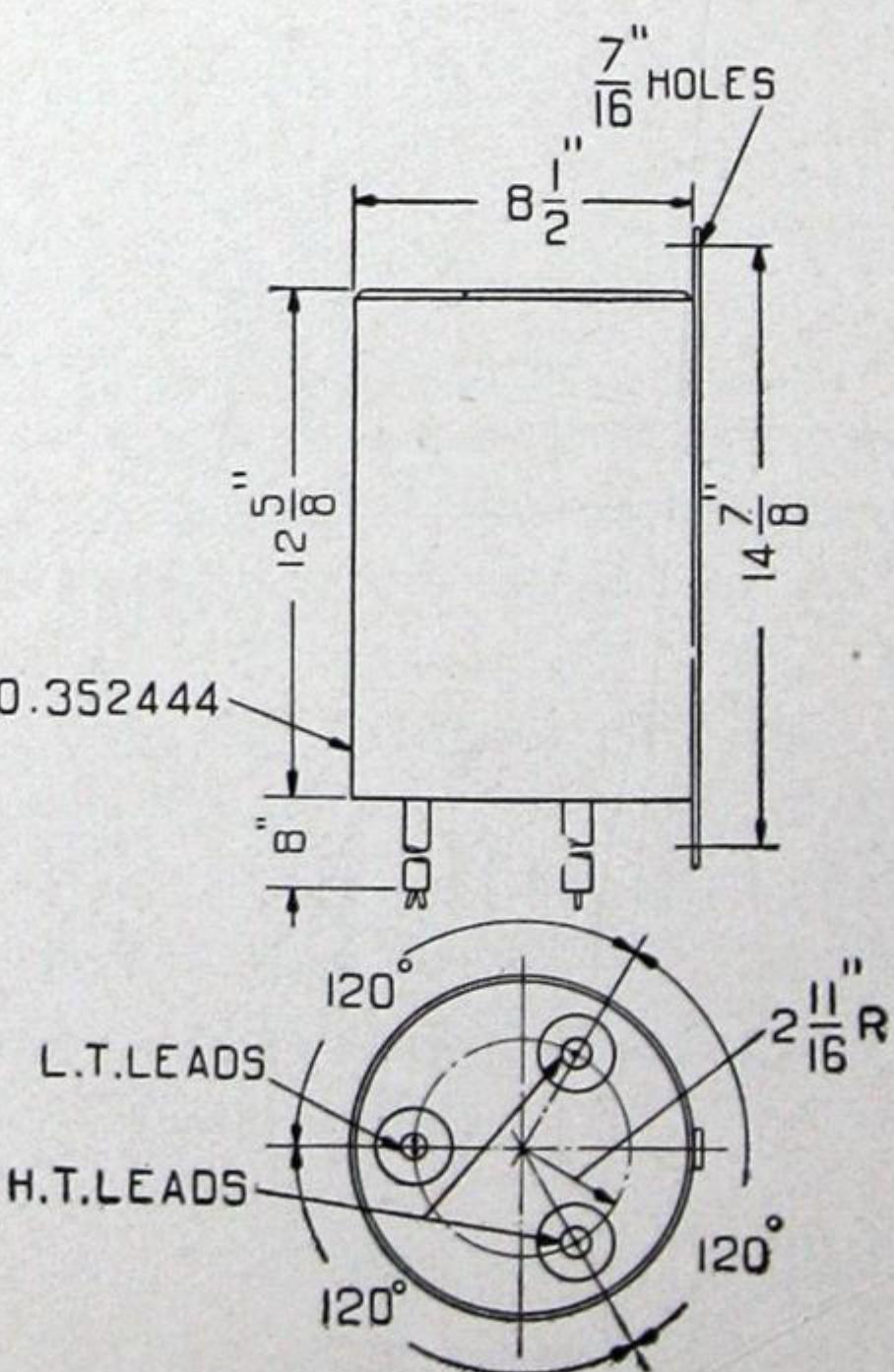
STYLE NO. 352443



Style No. 352331



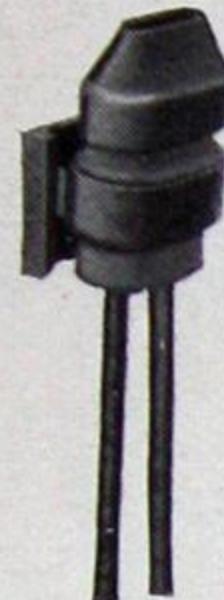
Style No. 352444



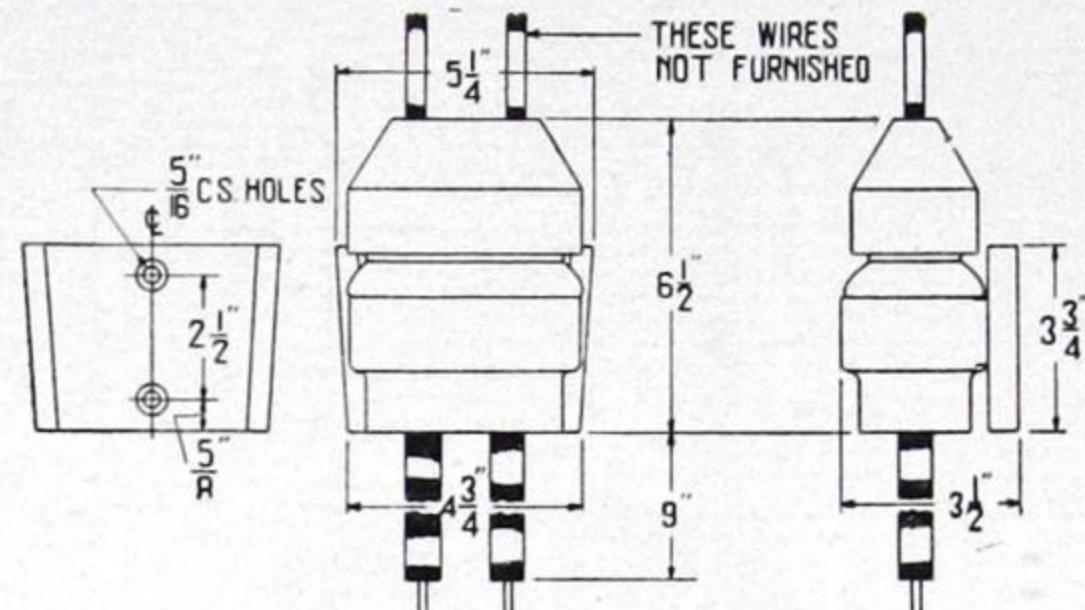
Dimensions are for reference only. For official dimensions apply to the nearest district office.

**SAFETY COILS—Continued**

**FILM PROTECTIVE DEVICE  
For Type SK (Oil-Insulated) Safety Coils**



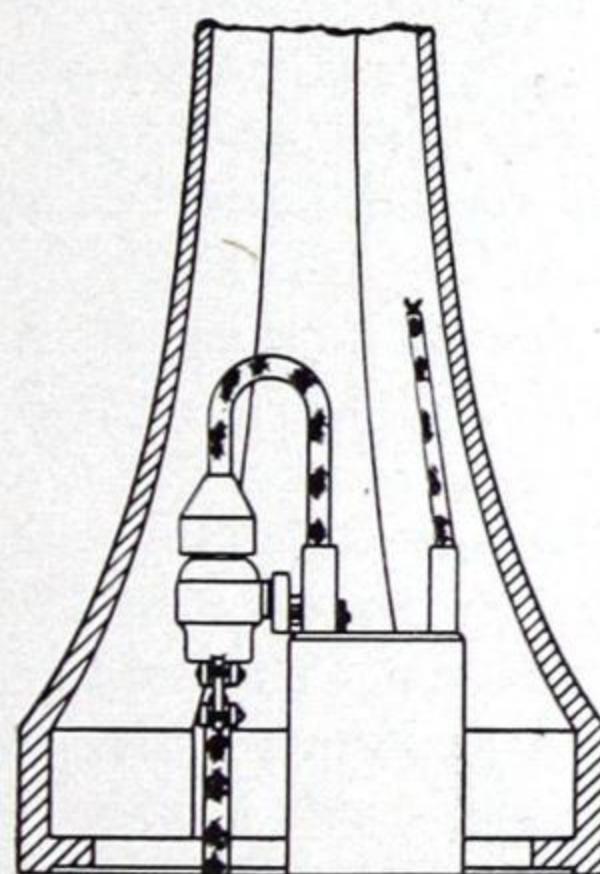
The use of the film protective device is recommended to prevent the overheating of the safety coil in case of any accidental opening of secondary circuit.



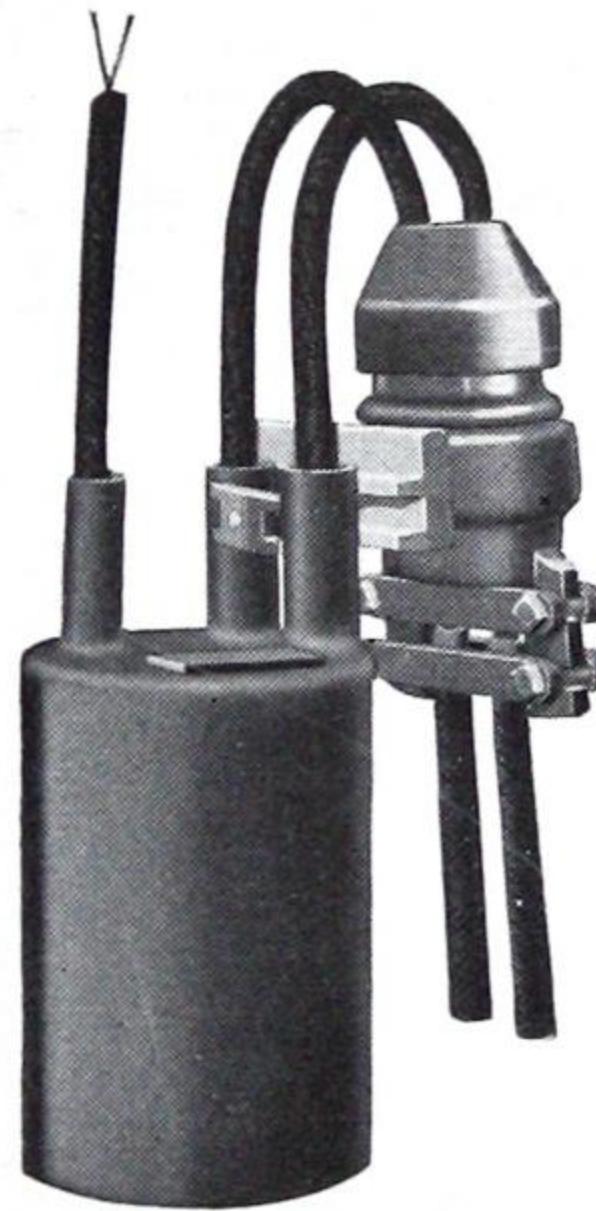
Capacity Kv-a.	Secondary Amperes	Max. Closed Circuit Voltage	APPROX. Wt., Lb. Net 5 Ship. 10	Style No. Film 353801 353802	Style No. Film Protective Device 354100 354100	List Price \$10 00 10 00
5.00	6.6	750				
10.00	6.6	1520				

**COMBINED SAFETY COIL AND DISCONNECTING POTHEAD**

**For 6.6 Amperes, 60-Cycle Circuits**



SAFETY COIL AND POTHEAD IN BASE OF STANDARD



COMBINED SAFETY COIL AND DISCONNECTING POTHEAD



PARTS FOR DISCONNECTING POTHEAD

In most up-to-date ornamental standard installations, it has been found that the advantages of both the safety coil and the disconnecting pothead are very desirable. To meet these requirements, the combination illustrated above has been designed.

The pothead consists of a cast-iron body with double bonding clamps for the cable and a disconnecting and short-circuiting switch enclosed in a porcelain case. It is attached rigidly to the case of the safety coil, and the combination is

located in a position easily accessible through the door opening.

The two bonding clamps are so arranged that one of them bonds the steel armor, and the other the lead sheath of the underground cable, thus preventing the accumulation of static voltage, which might be injurious to the cable insulation. Cable connections are made to screw terminals in the porcelain case of the disconnecting switch, and the pothead body is filled with an insulating compound which thoroughly seals the joint.

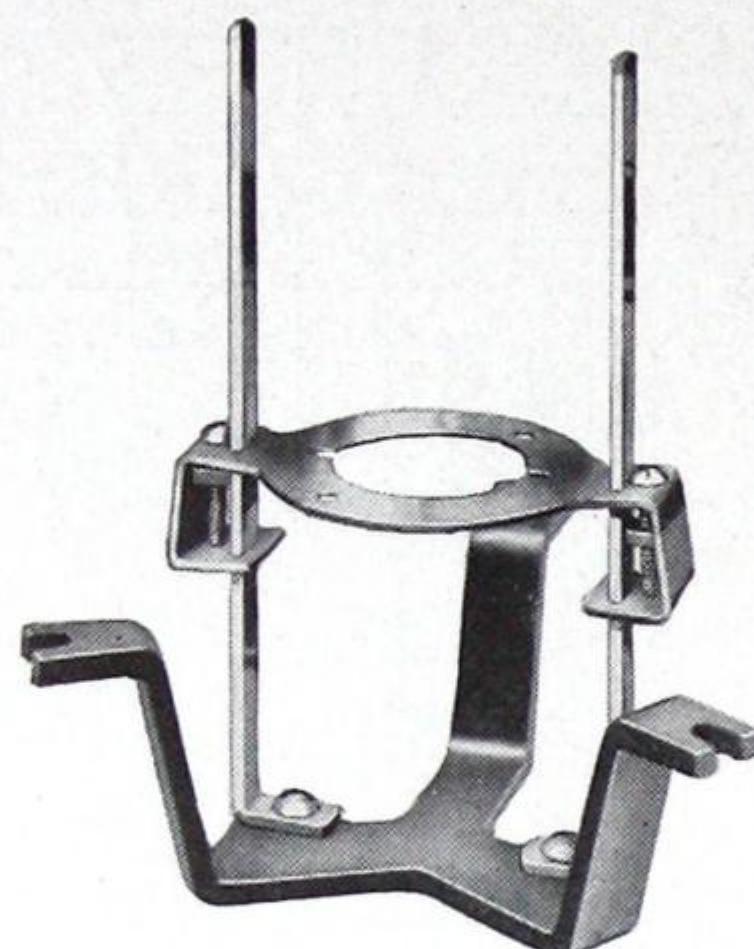
The primary leads of the safety coil are connected directly to the removable cap of the pothead. The contacts are so arranged that the removal of the cap disconnects the coil from the line, and, at the same time, connects the two cable ends together, thus maintaining the continuity of the series circuit. A testing plug is provided with which the underground system can be subdivided and tested at any time without the necessity of cutting the cable. See page 888 for prices of pothead parts.

Capacity Kv-a.	Lamp Lumens	Secondary Amperes	Secondary Volts	Style No.	Approx. Ship. Wt., Lb., Each	List Price
.220	4000	15	15	352332	50	\$36 00
.316	6000	20	16	352333	58	38 00
.518	10000	20	26	352334	60	48 00
.816	15000	20	40.83	352335	64	52 00
1.30	25000	20	65	352336	68	58 00

Dimensions are for reference only. For official dimensions apply to nearest district office.

*Order by Style Number*

## HOW TO SELECT THE PROPER SOCKETS FOR ORNAMENTAL LIGHTING UNITS



ADJUSTABLE SOCKET SUPPORT

The type of lamp socket used in a street lighting system depends (1) upon the kind of distribution system and (2) upon the size of the lamp to be used.

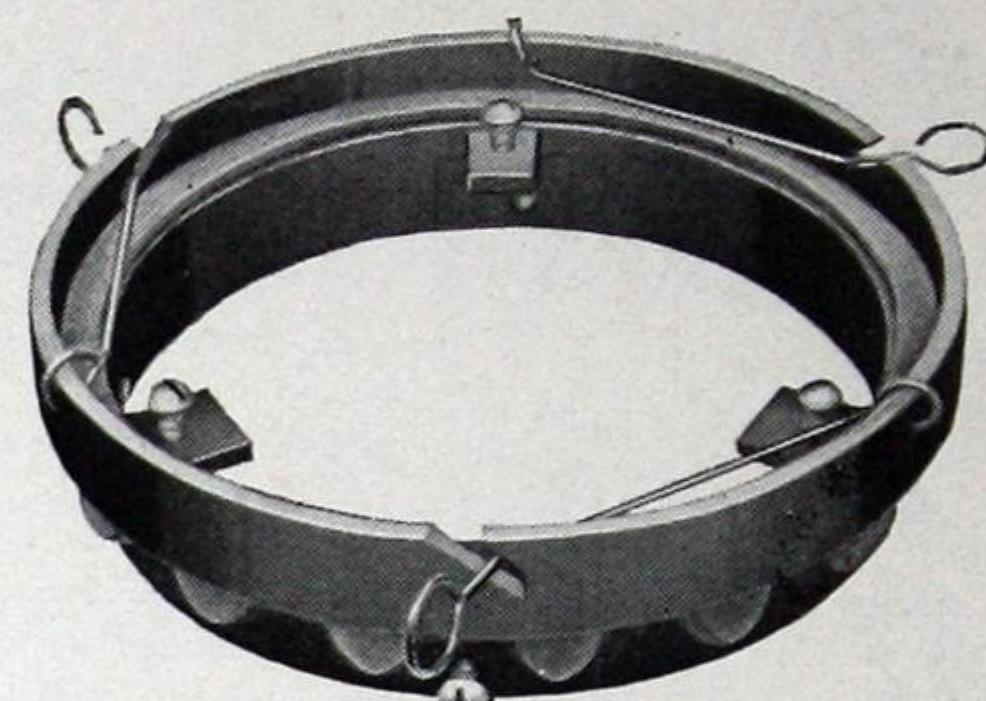
Multiple lamps for multiple systems have two sizes of bases—medium and mogul—and therefore require two kinds of sockets. Medium base sockets are used with multiple lamps of 200-watt size or smaller. Mogul sockets are used with multiple lamps of 300-watt size and larger.

All series lamps for series systems have mogul bases. The type of socket required depends upon the kind of distribution system on which they are used.

Straight series lamps are used on straight series circuits and require series film-sockets. Usually, an additional insulator is used in connection with series film-sockets.

When straight series lamps are used on an adjuster-socket system, reactance units are required. The reactance unit consists of a disc insulator, a mogul socket and a reactance coil assembled and electrically connected.

15 and 20-ampere series lamps require auto-transformer units or safety coils to step up the line current, which is usually 6.6 amperes, to the rated lamp current. The auto-transformer unit consists of a disc insulator, a mogul socket and an auto-transformer assembled and electrically connected. Both reactance units and auto-transformer units are arranged to fit lighting



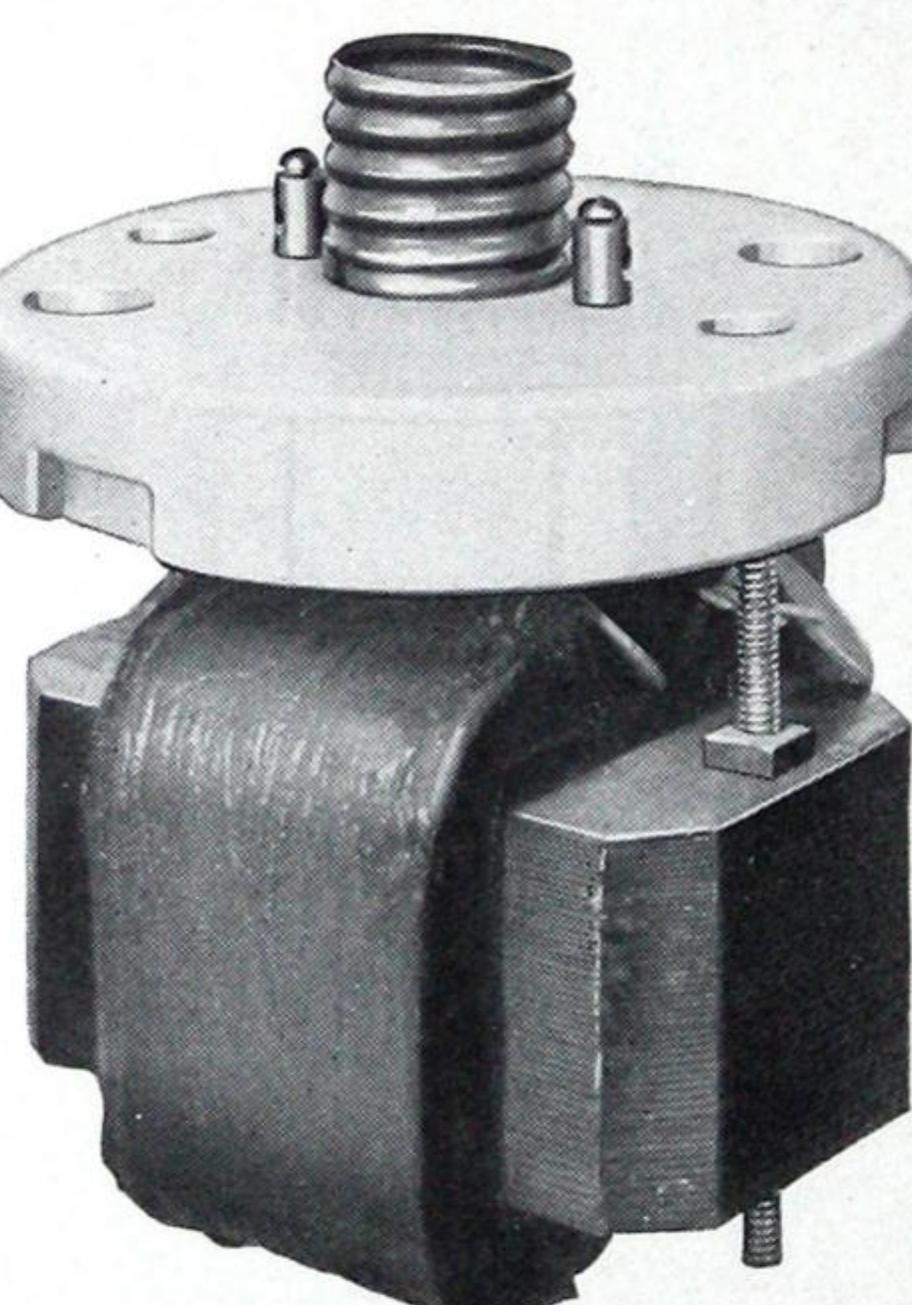
GLOBE RING SHOWING 3 LUGS FOR MOUNTING SOCKET SUPPORTS OR COIL UNITS

units without any kind of a socket support. To install them, it is only necessary to place the insulator in the proper position on the three lugs in the lower part of the lighting unit and make line connections to the binding posts.

All of the various types of sockets are arranged for use in any Westinghouse lighting unit and, therefore, are interchangeable. An adjustable socket support is furnished with each lighting unit on which both multiple and series sockets can be mounted. When reactance units or auto-transformer units are used, the socket support is not required.

The following table shows the kind of socket used on the most common street lighting systems. The reactance units and auto-transformer units listed are designed for 60-cycle service. Units for other frequencies can be furnished when required.

List prices do not include lamps.



AUTO-TRANSFORMER UNIT

### LIST PRICES

SYSTEM	LAMP		SOCKET		LIST PRICE
	Type	Size	Type	Style No.	
Multiple		200 Watt or Smaller		334749	\$0 95
Multiple		300 Watt or Larger		336179	95

**LIST PRICES—Continued**

SYSTEM	LAMP		SOCKET		LIST PRICE
	Type	Size	Type	Style No.	
Straight Series		6000 Lumen or Smaller		352937 354179	\$1.95
Series System with Safety Coils		4000 Lumen or Larger		336179	.95
Adjuster Socket Series Systems (Reactance Coils)		1000 Lumen 2500 Lumen		335970 335971	12.95 13.95
Series System with Auto Transformers		4000 Lumen 6000 Lumen 10,000 Lumen		335627 335628 335629	10.95 12.45 15.95

# Westinghouse Electric & Manufacturing Company

East Pittsburgh, Pa.

## WESTINGHOUSE SALES OFFICE

ABILENE, KAS., P. O. Box 20  
 ALBANY, N. Y., Journal Bldg.  
 \*ATLANTA, Ga., Westinghouse Elec. Bldg., 426 Marietta St.  
 BAKERSFIELD, CAL., 2224 San Emilio St.  
 \*BALTIMORE, MD., West. Elec. Bldg., 121 E. Baltimore St.  
 BIRMINGHAM, ALA., 1407 Age-Herald Bldg., 2030 Second Ave.  
 BLUEFIELD, W. VA., Rooms 601-602-603 Peery Bldg., Cor. Bland & Federal Sts.  
 \*BOSTON, MASS., Rice Bldg., 10 High St.  
 BRIDGEPORT, CONN., Bruce & Seymour Streets.  
 \*BUFFALO, N. Y., Ellicott Square Bldg., Ellicott Square.  
 BURLINGTON, IOWA, 315 North Third St.  
 \*BUTTE, MONT., Montana Elec. Co. Bldg., 52 East Broadway.  
 CANTON, OHIO, (Box 292-Mail and Telegrams)  
 CASPER, WYO., Turner Coffman Bldg., 124 W. 2nd Ave.  
 CEDAR RAPIDS, IOWA, 1616 Fifth Ave., (Mail P. O. Box 1067)  
 CHARLESTON, W. VA., Kanawha National Bank Bldg., Capitol and Virginia Streets.  
 \*CHARLOTTE, N. C., 210 E. 6th St.  
 \*CHATTANOOGA, TENN., Tenn. Elec. Power Co. Bldg., Market and 6th Sts.  
 \*CHICAGO, ILL., Conway Bldg., 111 W. Washington Street.  
 \*CINCINNATI, OHIO, West. Elec. Bldg., Third and Elm Sts.  
 \*CLEVELAND, OHIO, Station "B" Westinghouse Electric Bldg., 2209 Ashland Rd. S. E.  
 \*COLUMBUS, O., Interurban Terminal Bldg., Third and Rich Sts.  
 \*DALLAS, TEX., Magnolia Bldg., Akard and Commerce Streets.  
 DAVENPORT, IA., Central Office Building.  
 DAYTON, O., Reibold Bldg., 14 West Fourth Street.  
 \*DENVER, COLO., Gas & Electric Bldg., 910 Fifteenth St.  
 DES MOINES, IOWA, Equitable Bldg., W. 6th & Locust Streets.  
 \*DETROIT, MICH., Westinghouse Elec. Bldg., 1535 Sixth St.  
 DULUTH, MINN., Rooms 408-409-410 Bradley Bldg., Southeast Cor. Lake Ave. & Superior St.  
 ELMIRA, N. Y., Huett Bldg., 338-342 E. Water St.  
 \*EL PASO, TEX., Mills Bldg., Oregon and Mills St.  
 ERIE, PA., 1015 State Street.  
 FORT WAYNE, IND., 1010 Packard Ave.  
 FRESNO, CAL., Griffith-McKenzie Bldg., J and Mariposa Sts.  
 GRAND RAPIDS, MICH., 422 Kelsey Bldg., Pearl & Ottawa Sts.  
 HAMMOND, IND., (Mail —P.O. Box 238; Telegrams—1238 Jackson St.)  
 HARTFORD, CONN., 220 Market St.  
 \*HOUSTON, TEX., Union National Bank Bldg., Main St. and Congress Ave.  
 \*HUNTINGTON, W. VA., Westinghouse Electric Bldg., Cor. Second Ave. and Ninth St.  
 \*INDIANAPOLIS, IND., West. Elec. Bldg., 820 N. Senate Ave.  
 ISHPeming, MICH., 507 N. 5th St.  
 JACKSON, MICH., 705 Peoples National Bank Bldg.  
 \*JACKSONVILLE, FLA., Union Terminal Building, East Union and Ionia Sts.  
 \*KANSAS CITY, MO., 2124 Wyandotte St., Gateway Station.  
 KNOXVILLE, TENN., 413 Bankers Trust Bldg.  
 LITTLE ROCK, ARK., 2311 State Street.  
 LOUISVILLE, KY., Marion E. Taylor Bldg., 312 Fourth Ave.  
 \*LOS ANGELES, CAL., West. Elec. Bldg., 420 S. San Pedro St.  
 MADISON, WIS., P. O. Box 222.  
 MEMPHIS, TENN., Exchange Bldg., 130 Madison Ave.  
 \*Warehouse located in this city.

## WESTINGHOUSE AGENT-JOBBERS

ABILENE, KANSAS, Union Electric Co.  
 ALBANY, N. Y., H. C. Roberts Electric Supply Company  
 ATLANTA, GA., Gilham-Schoen Electric Co.  
 BALTIMORE, MD., H. C. Roberts Electric Supply Co.  
 BIRMINGHAM, ALA., Moore-Handley Hardware Co.  
 BLUEFIELD, WEST VIRGINIA, Superior Supply Co.  
 BOSTON, MASS., Wetmore-Savage Electric Supply Co.  
 BUFFALO, N. Y., McCarthy Bros. & Ford.  
 BUTTE, MONTANA, The Montana Electric Co.  
 CHICAGO, ILL., Illinois Electric Co.  
 CHARLOTTE, N. C., Carolina States Electric Co.  
 CLEVELAND, OHIO, The Erner Electric Co.  
 COLUMBIA, S. C., Mann Electric Supply Co., Inc.  
 DULUTH, MINN., Duluth Electrical Supplies Co.  
 DENVER, COLO., The Mine & Smelter Supply Co.  
 DETROIT, MICH., Commercial Electric Supply Co.  
 EL PASO, TEXAS, The Mine & Smelter Supply Co.  
 ERIE, PA., Star Electrical Co.  
 EVANSVILLE, IND., The Varney Electrical Supply Co.  
 HOUSTON, TEXAS, Tel-Electric Co.  
 HUNTINGTON, WEST VIRGINIA, Banks-Miller Supply Co.  
 INDIANAPOLIS, IND., The Varney Electrical Supply Co.  
 JACKSONVILLE, FLA., Pierce Electric Co.  
 KANSAS CITY, MO., Columbian Electrical Co.  
 LOS ANGELES, CAL., Illinois Electric Co.

## WESTINGHOUSE SERVICE SHOPS

ATLANTA, GA.....	426 Marietta Street
BALTIMORE, MD.....	501 East Preston Street
BOSTON, MASS.....	12 Farnsworth Street
BRIDGEPORT, CONN.....	Bruce Ave. and Seymour Street
BUFFALO, N. Y.....	141-157 Milton Street
CHARLOTTE, N. C.....	210 E. 6th Street
CHICAGO, ILL.....	2201 W. Pershing Road
CINCINNATI, OHIO.....	Third and Elm Streets
CLEVELAND, OHIO.....	2209 Ashland Rd., S. E.
DENVER, COLO.....	1909-11-13-15 Blake Street
DETROIT, MICH.....	1535 Sixth Street
HARTFORD, CONN.....	220 Market Street
HUNTINGTON, W. VA.....	9th Street & Second Ave.
INDIANAPOLIS, IND.....	814-820 N. Senate Ave.

JOHNSTOWN, PA.....	47 Messenger Street
KANSAS CITY, MO.....	2026 Wyandotte Street
LOS ANGELES, CAL.....	420 S. San Pedro Street
MINNEAPOLIS, MINN.....	2303 Kennedy St., N. E.
NEW YORK, N. Y.....	467 Tenth Avenue
PHILADELPHIA, PA.....	30th and Walnut Streets
PITTSBURGH, PA.....	6905 Susquehanna Street
PROVIDENCE, R. I.....	393 Harris Ave.
ST. LOUIS, MO.....	717 South Twelfth Street
SALT LAKE CITY, UTAH.....	573 W. Second South Street
SAN FRANCISCO, CAL.....	1466 Powell St., Emeryville, Cal.
SEATTLE, WASH.....	3451 East Marginal Way
UTICA, N. Y.....	408 Pine Street

## WESTINGHOUSE MARINE SERVICE PORT ENGINEERS

BALTIMORE..... 501 E. Preston Street  
 NEW ORLEANS..... 1028 South Rampart Street  
 NEW YORK..... 467 Tenth Ave.

PHILADELPHIA.....	30th & Walnut Sts.
SAN FRANCISCO.....	1400 Fourth Street
SEATTLE.....	3451 E. Marginal Way

## CANADIAN COMPANY

CANADIAN WESTINGHOUSE COMPANY, LTD., Hamilton, Ontario

## WESTINGHOUSE ELECTRIC INTERNATIONAL COMPANY

150 BROADWAY, NEW YORK, U. S. A.

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